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M E D I C A L
C O M M E N T A R I E S

FOR THE YEAR M.DCC.XCII.

EXHIBITING A CONCISE VIEW OF THE
LATEST AND MOST IMPORTANT DISCOVERIES
IN MEDICINE AND MEDICAL PHILOSOPHY,

COLLECTED AND PUBLISHED BY
ANDREW DUNCAN, M.D.F.R. & A.SS. ED.

PHYSICIAN TO HIS ROYAL HIGHNESS THE PRINCE OF WALES
FOR SCOTLAND,
FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH,
MEMBER OF THE ROYAL SOCIETIES OF MEDICINE
OF PARIS, COPENHAGEN, EDINBURGH, ETC.
AND PROFESSOR OF THE INSTITUTIONS OF MEDICINE
IN THE UNIVERSITY OF EDINBURGH.

Neglecta reducit, sparsa colligit, utilia seligit, necessaria ostendit, sic utile.

Baglivius.

DECADE SECOND.

VOL. VII.

EDINBURGH:

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M.DCC.XCII.



TO
Dr THOMAS FOWLER,

PHYSICIAN IN YORK,

THIS VOLUME OF
MEDICAL COMMENTARIES

Is

Respectfully Inscribed,

As a Testimony of

The Esteem and Affection

Of

His sincere Friend,

ANDREW DUNCAN.

No. 111. August 18

Dear Sir,

I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the above matter. I am sorry to hear that you are not satisfied with the result of the investigation. I have been unable to find any further information regarding the same.

I have, however, been able to ascertain that the same has been forwarded to the proper authorities for their consideration. I am sure that they will give it the attention it deserves. I am, Sir, very respectfully,
Yours obedient servant,
J. H. [Name]

Very respectfully,
J. H. [Name]

P R E F A C E.

IN the present volume, the section appropriated to the analysis of books, is extended to an unusual length. This has arisen from a desire to present to the reader, a full view of the new Medical Constitution, proposed for the kingdom of France by the Royal Society of Medicine of Paris. And, to prevent any misconception respecting the intended reformation, it has been thought better to insert a full translation of that article, than to give merely an analysis of it. For this translation, I am indebted to an ingenious young friend, Dr James Hamilton, son to Dr Alexander Hamilton, Professor of Midwifery in the University of Edinburgh, whose industry

and abilities are already so well known, and have been demonstrated on so many occasions, even at his early period of life, that his reputation can derive no addition from the mention of his name on the present occasion.

How far the plan proposed at Paris, for the instruction of those who are to practise medicine, and for the improvement of the art itself, will ever be fully carried into execution in any country, is indeed very doubtful. How far intelligent readers will think it the best plan that could be devised, must be left to their decision. For myself, I must acknowledge, that many parts of it appear to me liable to strong, and even unfurmountable objections. At the same time, I cannot help thinking, that every one who bestows upon it a serious consideration, will be satisfied, that it affords many useful suggestions which may tend to the improvement of every
 medical

medical school: and, independently of this, that, when duly attended to, it may, with every individual, contribute, in no inconsiderable degree, both to his own improvement, and to that of the Healing Art, if he have leisure and inclination to communicate to the public the fruits of that experience which has been instructive to himself.

ON account of the length of this article, although the present volume, in place of four hundred, contains near six hundred pages, yet, several important original articles have been necessarily deferred till a future publication. This, however, will not, I hope, prevent intelligent correspondents from communicating to the public, through the medium of these Commentaries, important observations which may occur to them in actual practice. And I have only to request, that those who cannot find a con-

venient opportunity for transmitting such communications directly to Edinburgh, would send them to the care of Messrs Robinsons, booksellers in London, by whom they will be duly forwarded to

Their most obedient Servant,

ANDREW DUNCAN.

EDINBURGH, }
DEC. 1. 1792. }

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ERRATUM—P. 125.

For— et sur les avantages retirer de son emploi
que peut la medecine—

Read— et sur les avantages, que peut retirer de
son emploi, la medecine, &c.

M E D I C A L
C O M M E N T A R I E S,
FOR THE YEAR 1792.

VOL. VII. DECADE II.

S E C T. I.

Account of New Books.

I.

Of the different Species of Inflammation, and of the Causes to which these Differences are to be ascribed. By James Carmichael Smyth, M. D. Fellow of the College of Physicians and of the Royal Society, and Physician Extraordinary to his Majesty. Vide Medical Communications, Vol. II. 8vo, London.

DR SMYTH is of opinion, in this interesting publication, that the principal causes of specific distinction amongst inflammations, may be referred to one or other of the four following circumstances.

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1st,

1st, The cause exciting the inflammation.

2^d, The function or use, in the animal œconomy, of the part inflamed.

3^d, The natural texture or structure of the same.

4th, That texture or structure of a part which is not natural to it, but is the consequence of some previous disease.

Although the proximate cause of inflammation must be the same in every instance, the more remote and evident causes, the objects of sense and of observation, are widely different, and have considerable influence in varying both the appearance and nature of the disease.

The *second* circumstance mentioned as a cause or source of specific distinction amongst inflammations, was, the function of the part inflamed. This circumstance, perhaps the least important of any, has given rise to the greatest number of distinctions among inflammations, physicians having looked upon the inflammation of every particular organ of the body as a distinct and specific disease. This is evident from the long list of names to be met with in every book of physic, expressive of each

each individual part of the body with the Greek termination (*itis*) as Phrenitis, Pleuritis, &c. Now, although the propriety, and even advantage, of distinguishing, with accuracy, the organ immediately affected by inflammation, cannot be called in question; yet, Dr Smyth thinks, that, in all such cases, the great difference in the symptoms is more owing to a difference in the function of the part inflamed, than to any specific difference in the nature of the inflammation.

The *third* circumstance stated as a cause of specific distinction among inflammations, was, the peculiar texture or structure of the part inflamed; a circumstance which, though hitherto overlooked, or but slightly attended to, seems to our author to constitute one of the most important distinctions of this disease.

Experience has long since taught us, that every part of the animal body, the cuticle and hair perhaps excepted, is liable to inflammation; and, by attending strictly to the phenomena, it is equally evident, that, according to the nature of the part affected, the disease puts on a different appearance, is accompanied by different symptoms, is of various termina-

tion, becomes more or less acute or chronic, and requires a different, or, at times, an opposite treatment.

The following then, Dr. Smyth thinks, may be justly considered as distinct species of inflammation, each of them having a specific character strongly marked, which, in every instance, seems entirely to depend upon the peculiar structure of the part inflamed.

- | | | |
|----|-------------------------------|-------------------------------------|
| 1. | The inflammation of the Skin, | <i>Erysipelas.</i> |
| 2. | — — — | Cellular membrane, <i>Phlegmon.</i> |
| 3. | — — — | Diaphanous membranes. |
| 4. | — — — | Mucous membranes. |
| 5. | — — — | Muscular fibres. |

Of the Erysipelas, or Inflammation of the Skin.

ALTHOUGH some physicians have excluded Erysipelas from the class of inflammations; yet, that it is a true inflammation, he thinks, is proved by the redness, heat, swelling, and pain of the part.

That

That the skin is the part principally affected, is obvious to the sight ; and although the swelling of the part depends upon the extravasation of a fluid into the cellular membrane, it does not follow that this membrane is in a state of actual inflammation. The contrary, Dr Smyth thinks, is clearly proved by the absence of pulsation, and of suppuration ; and although instances occur, where, the inflammation having been communicated from the skin to the cellular membrane, suppuration and abscess have been the consequence, yet before such an event takes place, the inflammation has ceased to be erysipelatous, or has at least become of a mixed kind. That the skin then is the true seat of the Erysipelas, he observes, must be universally admitted : But he has gone a step farther, and maintains, that the phenomena of this inflammation, and the peculiarity of the symptoms, are to be attributed entirely to the nature and texture of the skin.

This assertion, he thinks, will not seem improbable to those who reflect on the analogy between the skin and other membranes, or who consider with attention the symptoms that characterize the disease ; which cannot, Dr

Smyth supposes, be explained on any other hypothesis. The most remarkable of these are, the uniformity in the heat and redness of every part of the inflamed surface, the extent of the inflammation, the sudden and irregular manner in which it spreads, the peculiarity of its termination, which, while it remains purely erysipelatous, is never in suppuration, but in vesications, sloughiness, or gangrene. But what seems to him most conclusive in regard to the question, is, that the pathognomonic symptoms are constantly and uniformly the same, though the causes which produce them be numerous and of great variety. An idea, however, has prevailed, that these causes, though different in appearance, might be all referred to acrimony alone. But, that this conclusion has been too hastily made, he thinks will plainly appear from considering the five following heads, under which he has arranged the different causes of this affection.

1st, Mechanical injury, as, wounds or distension.

2^d, Heat and cold.

3^d, The bite or sting of insects.

4th, Chemical acrimony.

5th

5th, Fever.

To the four first instances of erysipelatous inflammation, the effect of causes merely local, systematic writers have given the name of Erythema, to distinguish them from the same disease, when connected with fever, or the consequence of some general indisposition.

Of erysipelatous inflammation connected with fever, there are several varieties. The following are what we most frequently meet with in practice.

The Rose, or erysipelas of the extremities, which is commonly preceded by lowness, lassitude, loss of appetite, and always by coldness or shivering, succeeded by a very smart fever, resembling the paroxysm of an intermittent, during which the patient is sometimes delirious; but the febrile symptoms, though violent, are seldom of long duration, and subside almost immediately upon the appearance of the inflammation, and soon cease entirely, where the natural progress of the disease is not interrupted.

In the Sideratio, or erysipelas of the head, the symptoms of fever are not always mitigated on the appearance of the inflammation: on

the contrary, the pulse, in some cases, becomes more frequent, while the inflammation continues for some days to spread or shift from place to place. Dr Smyth, however, considers the Erysipelas in this case, as well as in the former, to be a critical solution of the fever; and thinks, that the difference between them, depends upon the inflammation, or exanthema, being slower in coming out on the head and face, and upon its being accompanied, from the greater pain and irritation, with a higher secondary or symptomatic fever.

The Zona or Belt, though commonly reckoned an Erysipelas, he thinks seems to partake more of the nature of a herpes coming out in pustules or pimples: it commonly spreads round the waist, and sometimes on the neck and shoulders. This species has been undeservedly accounted extremely dangerous, unless when the patient is in the decline of life, has some of the viscera in a diseased state, or is, in other respects, in a bad habit of body.

Besides these three kinds of erysipelatous inflammation, which are all more or less critical, it sometimes occurs, in fevers, merely as a symptom altogether unconnected with the solution
or

or termination of the disease, as in most epidemic fevers.

Having had, in the preceding account, Dr Smyth observes, occasion to remark, that Erysipelas is excited by very opposite causes, we should be apt to conclude, that in this, as in other inflammations, the appearance and termination of the disease must be somewhat affected by the difference of the cause producing it; and experience evinces the truth of this analogical reasoning, as we find that even those symptoms which characterize the disease, appear somewhat different, according to the difference of the cause.

He then proceeds, from the preceding observations, to draw the following conclusions.

1st, That Erysipelas is an inflammation of the skin only. 2^d, That the peculiarity of the inflammation depends solely on the nature and texture of the skin. 3^d, That acrimony is not the only cause capable of producing it. And, 4th, That though the difference of the cause cannot alter, yet it has considerable influence on, the symptoms and appearance of the disease.

Dr

Dr Smyth concludes this head of his Essay, by making some observations on the various methods of cure employed in Erysipelas: for, while some physicians, influenced by the affinity between this and other inflammations, have strictly adhered to the antiphlogistic plan; others, apprehensive of its termination in gangrene, have as constantly, and from the beginning, followed an opposite mode of treatment. Sometimes the one, sometimes the other method, is preferable; and, often, neither the one nor the other can be strictly adhered to. A judicious physician will always be more guided by the particular circumstances of the case, than the name of the disease.

Of the Phlegmon, or Inflammation of the Cellular Membrane.

THIS species of inflammation, he observes, is the most frequent of any, and was known to the Greeks by the name of Phlegmone. Galen; to whom we are indebted for this information, has, in his definition* of it, pointed

* Hoc phlegmones nomen Græcis dici consuevit, de carnis partibus majorem in molem cum tensione, renixu, dolore pulsatorio, calore et rubore extuberantibus. *Galen de Tumor. præter naturam*, Lib. i. cap. 2.

ed out, not only the most distinguishing symptom, (*dolor punctorius*), but also the seat of the complaint; to which two circumstances he might have added a third, equally characteristic, viz. its termination in suppuration or abscess.

He includes under this species, the inflammation, not only of the cellular membrane, strictly so called, but also of all parts of a loose spongy texture, consisting principally of cellular membranes, connecting a series of minute blood-vessels and nerves, such as the adipose membrane, glands, and viscera.

The following he thinks are the most common causes of this inflammation.

1. Mechanical Injury.
2. Acrimony.
3. Obstruction.
4. Fever.

As Acrimony, he observes, has by some been reckoned the only cause of Erysipelas, so likewise an opinion has prevailed, that it was the cause of Erysipelas alone. But the venereal bubo, is an example of a real phlegmonic affection, occasioned by acrimony.

Although

Although suppuration be the usual termination of Phlegmon, yet it sometimes terminates in gangrene; never, in Dr Smyth's opinion, from the violence of the symptoms, or pain, but from the nature of the cause, or constitution of the patient. It may also terminate differently, according to the organization of the part.

There is certainly no inflammation, which, in general, in the first stage, requires a more free use of the lancet, or bears it better, than Phlegmon. The phlegmonic inflammation, especially of the lungs, is not always purely inflammatory. It is sometimes combined with catarrh, with gout, or arises from causes which have a septic tendency: In all such cases, bleeding is of doubtful efficacy, if not improper. When the termination in suppuration is unavoidable, bleeding is evidently prejudicial. The strength of the patient must be supported, whilst the vessels of the part are relaxed by a moist heat, or even stimulated by warmer applications.

Of the Inflammation of Diaphanous Membranes.

UNDER this name, Dr Smyth comprehends all those membranes of a firm hard texture,
and

and a certain degree of transparency, viz. the pleura, peritonæum, pericardium, membranes of the brain, tunica vaginalis testis, periosteum, and the capsular ligaments of the joints.

It is asserted by the illustrious Haller, that these membranes, from the small share of sensibility they seemed to possess, could not be the seat of inflammation or acute pain. But, from accurate observation and experiment, it is now ascertained, that these membranes, which show little signs of sensibility in the natural state, become, when affected by inflammation, exquisitely sensible, and the seat of the most acute pain.

The particular symptoms which characterize this species of inflammation, are not yet accurately ascertained. We are certain, however, that it is attended with great pain and high fever, which, in this case, as in Phlegmon, is in proportion to the inflammation and pain. It is most particularly distinguished from Phlegmon and Erysipelas, by its termination.

Diaphanous membranes, in consequence of inflammation, are found thickened, opaque, sloughy, with a gelatinous or purulent exudation on their surface, sometimes causing preternatural

ternatural adhesions ; at other times, the cavities lined by these membranes, are filled with a turbid serum, with filaments floating in it.

Amongst the causes of inflammation peculiar to Diaphanous membranes, Dr Smyth observes, that he knows none which is general, but Air, and, even that, perhaps, does not affect the periosteum. Venereal virus, Gout, and Scrophula, are partial causes : the first attacking the periosteum, the second the capsular ligament, the third both. Pregnancy may be reckoned a predisposing cause, at least, to peritoneal inflammation.

With regard to the treatment, he is inclined to believe, that it bears purging better than Phlegmon, though it does not admit of so liberal an use of the lancet ; the strength of the patient being more apt to sink upon bleeding, and the disease to terminate in gangrene.

*Of the Inflammation of Mucous or Pituitous
Membranes.*

NOTWITHSTANDING there is great reason to believe, that the structure of these membranes are different in different parts, it is apparent

parent that there are certain qualities which they have in common, seemingly connected with the peculiarity of their function, and which serve to distinguish them from all others. Their texture is more soft and spongy than that of other membranes, their surface villous, and interspersed with the small openings of a number of glandular follicles, perpetually pouring out a thin transparent ropy fluid, which, while it moistens their surface, serves to protect them from the acrimony of the fluids to which they are exposed. Membranes, with such properties as have been now described, are found lining the nose, fauces, larynx, trachea, pharynx, œsophagus, stomach, intestines, vesica urinæ, urethra, vagina, uterus, palpebræ, and forming the tunica adnata of the eye. In all those parts they are liable to be inflamed, and the inflammation of them is always attended with similar symptoms. The chief of which are the following—

An increased thickness and sensibility of the membrane ; the villous surface red and spongy, with a considerable sense of heat and soreness, though seldom any very acute pain, unless what is occasioned by a fluid passing along an inflamed surface.

The

The mucus, which, in a natural state, is a mild transparent ropy fluid, loses its tenacity, in consequence of inflammation. At first, it is thin and acrid, frequently excoriating the neighbouring parts; but, towards the end, it puts on a purulent appearance.

When fever accompanies this inflammation, he observes, that the fever is not a symptom of the inflammation; although this last, in many cases, may with propriety be considered as a symptom of the fever.

When this inflammation terminates favourably, the symptoms gradually subside. The discharge diminishing, at first resembles purulent matter; and at last, acquiring more tenacity and transparency, it regains every property of real mucus. In cases, where the termination is less favourable, the discharge sometimes excoriates and ulcerates the membrane itself; or, stopping suddenly, occasions phlegmonic inflammation and abscess in the cellular membrane, or neighbouring parts. There are also instances, though rarely, of its termination in gangrene.

These three first species of inflammation are, in the strictest sense of the word, acute diseases,

eases *, their symptoms being violent, and their termination speedy ; whereas, the inflammation of mucous membranes, is often so long without increase or decrease, that the disease is rather chronic than acute.

The principal causes of this species are, Catarrh, Contagion, Scrophula, Venereal virus, Error loci, Mechanical or Chemical acrimony.

But if the inflammation of mucous membranes, differs from other inflammations in symptoms and termination, it differs from them not less remarkably in the mode of treatment.

As this inflammation hardly ever occasions any considerable pain or fever, general bleeding is seldom necessary, local blood-letting being, in most instances, sufficient ; and purging is commonly attended with the most evident advantage. Opiates also, are here of singular efficacy. Cold and astringent topics, which in every other inflammation are hazardous or prejudicial, in this, are frequently employed, and, in general, with the very best effect.

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* The scrophulous, and possibly the venereal inflammation of the periosteum, he thinks, are exceptions to this rule.

Of the Inflammation of the Muscular Fibres.

A FIFTH species of inflammation, different in many respects from any of the preceding, and whose specific difference is likewise owing to the peculiar structure of the part, is the inflammation of the muscular fibre, commonly called Acute Rheumatism.

This inflammation is characterized by violent or acute pain, accompanied by fever, without any very considerable swelling of the part, and greatly aggravated by motion or distension. An inflammatory crust also appears on the blood that is taken away, and the disease is seldom cured without repeated bleedings, and a strict antiphlogistic regimen.

It never terminates, so far as Dr Smith has observed, in suppuration or gangrene; but when it continues long, or is not completely cured, it occasions debility, palsy, and rigidity of the muscular fibres or tendons, with an extravasation of a gelatinous matter about their sheaths, and about the ligaments of the larger joints, entirely destroying the motion of the limbs.

This

This inflammation differs also materially from the others with respect to the period of its duration ; for though the pain and fever accompanying it, be as violent as in any case whatever, the complaint is neither so acute, nor of so speedy a solution, as the three first species of inflammation, but, like the fourth, is apt to degenerate into a chronic disease, the pains and swellings remaining after the fever and primary inflammation have entirely subsided.

Its causes, in general, are extremely uncertain. Cold and moisture applied, in particular circumstances, seldom fail to produce it : mercury, imprudently administered, is a pretty frequent cause ; and perhaps other acrimonies, introduced into the habit, may have a similar effect.

With regard to the cure, Dr Smyth observes, that the illustrious Sydenham, who at first proposed to cure acute rheumatism by copious bleedings, was wise enough to rectify this mistake by his after experience, confessing that so great a loss of blood as was necessary to cure the disease, produced consequences which were not easily remedied. Some phy-

ficians, to obviate the inconveniences of this practice, have substituted topical for general bleeding; but where bleeding is necessary, the relief obtained by this is comparatively trifling; and, at any rate, in most cases bleeding serves only to palliate the symptoms, without removing the cause. This, he observes, can only be done by promoting a diaphoresis, which therefore deserves to be ranked among the principal means of curing Rheumatism, although, at times, it has been productive of the most baneful effects, when injudiciously employed.

After finishing the description of these five species of inflammation, the learned author concludes with observing, that if he has succeeded in proving, that the specific distinctions in these depend principally on the natural structure or texture of the part inflamed, it follows as a necessary corollary, that the form or species of inflammation, so far as it is connected with texture, will be equally diversified by a difference in this particular, whether natural or adventitious.

II.

An Inquiry into the Nature, Cause, and Cure of the Gout, and of some Diseases with which it is connected. By John Gardiner, M. D. Fellow of the Royal College of Physicians, and of the Royal Society of Edinburgh. 8vo, Edinburgh.

IN his preface, Dr Gardiner observes, that a question has been long agitated, whether the solids or fluids be primarily affected in diseases. This he resolves, by endeavouring to shew, that while some diseases may arise from a morbid affection of the solids, and others derive their origin from certain morbid changes in the fluids, yet no permanent affection of the solids, or considerable changes in the fluids, can take place, without their mutually affecting each other.

Our author declines giving a minute history of the Gout, both as the most remarkable

symptoms are mentioned in the course of the work, and as it has been already so well described by practical authors.

Gout, he observes, is a disease, rather of cold than of warm climates, of winter than of summer ; and, when not hereditary, intemperance, a full diet, and sedentary life, are considered as its remote causes. These do not act with equal force in all ; for some have escaped, although they have long exposed themselves to their action ; while hereditary gout has attacked others, in spite of the strictest attention to exercise and temperance : when, however, the remote causes are applied to such a constitution, they act with double force.

What some enumerate as remote causes, our author thinks should rather be considered as occasional or exciting. These are, whatever produce debility, and its concomitant, a preternatural irritability of the system. Genius, he observes, only predisposes to gout, so far as it is connected with a sedentary life, and full diet. In the same manner, he accounts for the effects of corpulency ; for when it depends upon a peculiarity of constitution, he does not think it at all obnoxious to this disease. Although

though regular gout occurs most frequently in robust habits, yet it is not until they have exposed themselves long to its remote causes.

Notwithstanding the great diversity of opinion concerning the origin of gout, yet there is nothing more general than a belief in its remote causes, as above enumerated. Our author, therefore, remarks, that it is surprising, and much to be regreted, that men of abilities, in treating of this disorder, have not prosecuted, with sufficient ardour, an inquiry into the effects of these remote causes on the constitution.

Dr Gardiner now proceeds to examine the effects of diet; and observes that, although nature allows us a considerable latitude in its use with impunity, yet when the quantity of food and of strong liquors taken, is disproportioned to the powers and exercise of the body, disorders occur in the *primæ viæ*, and digestion is weakened, which, in more delicate and irritable constitutions, gives rise to nervous, hypochondriac and hysteric disorders; and in such cases, he rejects the use of strong liquors after meals, as he thinks they rather tend to exhaust than to raise the spirits, from the excitement they oc-

caſion. Thoſe of a firmer habit, indulging in full diet and ſedentary life, are attacked with complaints, neither ſo numerous, ſo violent, nor ſo permanent, as more delicate men and women; yet their intervals of eaſe are neither ſo long, nor ſo complete, as in thoſe who, from the greater ſtrength of their conſtitution and digeſtive organs, have regular fits of gout.

Dr Gardiner next offers ſome proofs to ſhew, that an acrimony may be generated in our fluids; and takes notice of an affinity between certain periodical eryſipelatous inflammations, and the gout. The variety of complaints, he thinks, ariſe not ſo much from a difference in the ſpecies of acrimony, as from a difference of conſtitution. Our author obſerves, that it is not thoſe who have perſevered in a ſteady courſe of intemperance that are moſt ſubject to the regular gout. With ſuch, the functions of the digeſtive organs are much injured, which is incompatible with the production of that diſtemper. It is perſons with ſtrong conſtitutions and good appetites, that have not hurt their digeſtive organs by intemperance, but who indulge in a full diet, and a regular, though moderate uſe of ſtrong liquors, and now and then

then an accidental excess in their use, with a sedentary life, that are most liable to the true gout.

While the constitution remains unimpaired, the generation of arthritic acrimony is very gradual, and its accumulation at first extremely slow; so that the interval may be protracted to some years. As the constitution, by repeated fits, begins to decline, they become shorter, till, at last, the fits return twice a year. Our author supposes this acrimony to arise from some deficiency in the digestive powers, or from the too great quantity, or acrid quality of the chyle to be assimilated into the nature of our fluids by the force of the circulation, and other functions in the animal body. He observes, that the accumulation of this acrimony is not in proportion to its generation in the body; for nature is constantly employed throwing it off by the skin, kidneys, intestines, and lungs. A diminution of their functions, he thinks, is partly at least the cause of its accumulation.

In hereditary gout, he observes, the first attack is earlier, the intervals shorter, and the atonic state takes place sooner, than in the acquired gout. He accounts for the shortening of the intervals,

intervals, from the quicker accumulation of the arthritic matter, and by observing, that when nature is accustomed to a particular mode of acting, to free the habit from an acrimonious fluid, she will more readily and easily renew the same process, when similarly stimulated. Besides, in every fit of the gout, there is more or less of a noxious fluid deposited in the cellular substance, or neighbourhood of the tendons and ligaments; and thus gradual stiffness of the joints comes on.

Gout, our author supposes to arise from a defect in the functions of the primæ viæ, which is owing to a morbid condition of the nerves of the stomach and bowels, either derived from parents, or induced by an indulgence in the remote causes of the disease. He supposes the principle of life to be a considerable agent in digestion; and as the nerves are the conductors of this principle, it seems probable, that when a morbid change is induced upon them, particularly those of the stomach, there will be a proportionable alteration in the secretion of the gastric fluids. In this state, an acid fermentation easily takes place in the stomach, which keeps up the weakness of
the

the nerves; and as the stomach is the centre of sympathy, its irritability is soon communicated to the rest of the system. In such a state, he endeavours to shew, that ardent spirits do not prevent the generation of acid, but rather keep up the debility. He next proceeds to explain why the same causes in some constitutions produce gout, and, in others, hysteric and hypochondriac affections. This he ascribes to the difference of irritability; the excess of which, in the latter cases, will prevent any accumulation of this acrimony in the system, by its causing an excitement to throw itself off by the usual emunctories. Robust habits, on the contrary, are capable of resisting its action for some time, until, by the application of the occasional causes producing debility, and proportionable irritability, if the arthritic acrimony prevail in the habit, there will be an excitement of the system in the production of a paroxysm. No regular fit of the gout, he observes, can take place, while an excess of debility prevails. Debility, he thinks, is attended with a proportionable increase of irritability, until a certain degree, when the senses begin to fail, and the irritability is proportionably diminished.

nished. This last species of debility seems to accompany the depressing passions of the mind; and, in such a situation, the regular gout degenerates into the atonic state; when, he thinks, there is reason to believe, the arthritic matter acts on the brain and nerves. The sympathetic affections, he observes, increasing with a more advanced state of gout, have led some people to assert, that gout is a nervous disorder, and to deny the existence of any morbid matter. To this he answers, that although the nerves be affected in every disease, yet only a particular class of affections is strictly denominated nervous, in which gout cannot be ranked, as, in its regular attacks, it is evidently inflammatory.

In order to acquire a just notion of the nature of gout, he thinks it necessary that an accurate view should be taken of its state in different constitutions, and at its most remarkable periods; and this he endeavours to do at some length. The division of gout into the Regular, Irregular, and Atonic, seems to our author the best. He considers a regular fit of gout, as a salutary paroxysm, excited by certain laws in the system, to free the body of a morbid matter, generated in the fluids, which,
if

if retained, would prove hurtful to the constitution. Under the Irregular gout, he comprehends not only what is called the Retrocedent, and the Misplaced gout, but every other morbid state of the body and mind, arising from a defect in the critical discharge of the arthritic matter. The irregular, he thinks, most probably arises from some peculiarity of constitution, or defect in the nerves of the *primæ viæ* : “ For,” (says he) “ notwithstanding I have
“ alleged that the regular gout arises from
“ some deficiency in the digestive organs, yet
“ I am also of opinion, that a certain degree
“ of firmness in the *primæ viæ*, and in the
“ system in general, is requisite for the formation of a regular paroxysm. But when this
“ degree of firmness is wanting, and the stomach and bowels are in their debilitated
“ state, approaching to that of hypochondriac
“ patients, it is the Irregular gout that commonly takes place.”

He confines the term, Atonic gout, to such cases as those in which the arthritic acrimony prevails, but in which no effectual exertion of the system takes place, to free the body from the arthritic matter ; and he considers it merely
ly

ly as an advanced state of the irregular gout. The occurrence of any inflammation, he observes, gives relief in the irregular gout, in like manner as a regular fit; and this he mentions as an additional evidence of the existence of a *materies morbi*. He then proceeds to explain the difference between a nervous disease, and nervous complaints in the gout. The symptoms previous to a regular paroxysm, he thinks, may arise from the action of the arthritic matter on the extremities of the nervous filaments.

To sympathy he ascribes the quick transition of pain from the one foot to the other: and the progress of the pain from one joint to another, he refers to the inability of the vessels of one part to throw out all the acrimony.

The morbid matter of measles, small-pox, and erysipelas, he supposes thrown out of the system in the same manner as that of gout. In inflammatory rheumatism, the secretion of morbid matter, according to our author, commences among the ligaments and tendons; then moves, with an alleviation of pain, to the integuments, and is at last performed by the excretory vessels of the skin, which produce copious perspiration

perspiration towards the declension of the disease. This, he observes, divides the progress of inflammation into three distinct stages, perfectly similar to a fit of gout.

After this, Dr Gardiner proceeds to consider the general doctrine of inflammation, and observes, that an increase of stimulus applied to the internal surface of the small arteries, may produce a secretion, by the excretory vessels, of a morbid matter ; but he doubts if any increase of stimulating power in the blood be capable of producing a permanent inflammation previous to such a secretion. As he considers irritation as the cause of every kind of inflammation, he takes a view of its effects. On the application of external stimuli, a greater quantity of blood than in a natural state is propelled through the small vessels of the part affected : their action is increased, and their diameters enlarged : the redness becomes vivid ; and, from the extension of these vessels, and from others, which were before invisible, coming into view, a swelling is, of course, observed, attended with increase of heat, pain, and throbbing. During this period, some obstruction seems to be given to free circulation ;
which,

which, he thinks, does not arise from any diminution of the diameters of the arteries, but from a larger quantity of blood being propelled through them than formerly. From the great force of the small arteries, in this state of obstruction, to propel their fluids, the very small vessels arising from them, carrying in their natural states pellucid fluids, are gradually enlarged, and carry to their terminations thicker fluids, and sometimes even blood. Such an inflammation may terminate by resolution, suppuration, or mortification. In the action of blistering plaster, he observes, the gradual effects of external stimuli are clearly shewn. Since irritation, externally applied, uniformly produces inflammation, it is reasonable to suppose that the operations of nature must be similar. There is, however, a difference in the action of the acrimonious fluids, some appearing to excite inflammation immediately on being secreted, while others seem to remain in a state of stagnation for some time, before they acquire a sufficient degree of acrimony to produce the same effect. He here introduces some remarks on the cure of inflammation by resolution ; although, he observes, it is not always

ways adviseable. Nature excites pain, he thinks, in order to call our attention to the seat of disease. It is likewise, he imagines, of great benefit, by being attended with a proportionably increased secretion of morbid matter. Thus resolution may be sometimes hurtful. In order to account for the morbid matter which produces rheumatism and gout, always attacking the joints, he only suggests the idea of specific stimuli, which especially affect particular parts.

In the *second* section, Dr Gardiner treats of the method of cure. The opposite of the remote causes seem naturally the most effectual means in the cure of gout. They also fulfil the two principal curative indications; for by temperance we prevent, as much as possible, the generation of arthritic matter; and, by exercise, we promote its expulsion when generated, by the excretories of the skin and other emunctories.

He is of opinion, that gout may be cured, and regrets the general notion of its being incurable. The preservation of the strength of the patient must be well attended to in the

method of cure. The diet ought to be diminished gradually, and variety at meals avoided. Water should be the only beverage, and vinous liquors only used as a cordial.

The exercise is to be adapted to the strength and quantity of food taken by the patient. It should never amount to fatigue, but be employed so far as to keep up a free perspiration. Its effects may be assisted by friction, the use of flannel and the warm bath, all which he prefers to copious perspiration raised by internal remedies. The cure, he observes, is not to be attempted by Peruvian bark, Bitters, or Aromatics; as they often stop the paroxysm, without acting on the cause of the disease; and the patients are soon seized with some more dreadful malady. He then gives an account of the composition and effects of the most fashionable gout powders; and observes, that the mischiefs imputed to some of them must be considered as a proof of their powers; and that they rather did too much than too little. *Hepar sulphuris*, he thinks, may be used with advantage, as promoting the expulsion of the arthritic matter by the skin and intestines.

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The benefits derived from alkaline remedies, both in gravel and gout, he ascribes to the sympathy existing between the urinary passages and the stomach. They neutralize whatever acid may be found in the stomach, and are powerful solvents of phlegm. Those hurtful stimuli being thus taken away, the nerves of the primæ viæ gradually recover their natural strength. Much, however, is to be ascribed to the regimen observed during their use; it should be neither so low as to induce debility, nor so high as to hazard indigestion.

As it is observed, that when the swellings of the joints suppurate, the intervals are more complete, the paroxysms less severe, and the atonic gout retarded, it is natural to suppose that artificial issues will possess some of these good effects.

Dr Gardiner now proceeds to take notice of the means employed for mitigating the paroxysms. He thinks it most adviseable for the patient to continue his usual mode of living during the fit, unless the symptomatic fever be considerable, when no meat should be allowed. The great point, however, he observes, is to

procure a plentiful perspiration in the feet; and he describes the best method of effecting it, by flannel socks and oil'd silk bootikens. Until the patient be able to walk about in his usual way, these coverings of the feet should not be laid aside. He also recommends easy shoes, and walking as soon as the pain will permit. In cases of extreme pain, or want of rest, opiates, he observes, are to be sparingly used. In sympathetic affections of the stomach, lungs, &c. when acidity, bile, phlegm, or indigestion is the cause, vomiting is to be excited by warm water, aided by a little volatile alkali, or mustard flower, or by ipecacuan. After their operation, an opiate is in general of service. When the ceasing of the pain indicates that the fit is incomplete, he recommends the moderate use of wine, or brandy, with spices; bathing the feet with warm water, and the application of sinapisms. If these be ineffectual, blisters must be applied to the ancles, thighs, arms, or part affected. He relates a case in which leeches were applied to the pained part with considerable relief. With the same intention of abating the inflammation and severity of pain, cataplasms have been recommended;

commended ; but our author is afraid of their becoming cold, and of course dangerous.

He points out the great danger to be dreaded from the access of cold air, and the application of cold water to gouty inflammations. He observes, that there are many cases which serve rather to astonish than to instruct, as they do not admit of a satisfactory explanation. But the more knowledge we acquire concerning the nature of any disease, the fewer of these will occur. He has given an ingenious explanation of a case of gout mentioned by Dr Clarke, which was cured by the patient's eating boiled salted herrings at bed-time, without satisfying his thirst that night. Now, our author observes, that this patient's thirst must have been excessive ; and as thirst is the criterion of the increased action of the absorbents, we may, he thinks, safely conclude, that after a supper of three salt herrings from the pickle, unwashed and broiled, without the patient being permitted to drink till next day, the absorption of the secreted arthritic matter must have been considerable.

In the atonic gout, the skill of the physician reaches no farther than to alleviate pain, and

the anomalous complaints incident to this disease, by a proper regulation of diet, and the use of exercise, or rubbing with a flannel or flesh brush. The warm bath, when not contraindicated by debility, and the employment of warm clothing, are much recommended to promote perspiration.

III.

III.

An Inquiry into the remote Causes of Urinary Gravel. By Alexander Philip Wilson, M. D.
8vo. London.

THE first part of this ingenious work contains the relation of many accurate experiments, which tend principally to prove, that, *cæteris paribus*, acidity of the primæ viæ increases the tendency of the urine to deposit lithic acid; that diluents diminish the quantity of lithic acid in any given portion of urine; that exercise, sudorifics, and diaphoretics, lessen the deposition of lithic acid; and that an acid matter is carried off by insensible perspiration. For an account of the ingenious manner in which these experiments were conducted, we must refer the reader to the work itself.

Our author observes, that urine, when left to itself, deposits, in a few hours, either a whitish matter, rendering it muddy, or chrystals of lithic acid, or both. These depositions he found to be, in some degree, incompatible

with each other, since, when the quantity of the one was increased, that of the other was proportionably diminished. He has also found, that while the lithic acid was present in greatest quantity in the urine of a person living on an acescent diet, the cream-coloured deposition was increased by food of a contrary tendency; that any cause increasing perspiration, while it diminishes the quantity of lithic acid, tends to produce the cream-coloured sediment in the urine; that the cream-coloured sediment is more soluble in urine, and more easily acted upon by acids, than the lithic acid. Hence he infers, that it is the lithic acid which is apt to form concretions in the urinary passages, and that the secretion of any acid matter by the kidneys, tends to increase its deposition: for experiments prove, that the addition of an acid to urine out of the body, always produces a deposition of lithic acid. He also takes notice of several effects of acids upon urine; and as the nature of lithic acid is well known, he proceeds to inquire into the properties of the cream-coloured sediment. He thinks that experiment proves it to be a neutral salt, containing lithic acid, which may be precipitated from

from it by other acids, in the form of fine sand, while the new compound being more soluble, renders the urine transparent.

From the different appearances of the urine, he takes notice of three distinct states in which it exists at different times, indicating different states of its secreting organs. The first is, when the vessels of the kidney are constricted, and then the urine flows limpid, and with little sediment of any kind. The second is, when the urine is as high-coloured as usual, but deposits less lithic acid, and more cream-coloured sediment, the kidney seems now in a state of relaxation.

When the vigorous action of the kidney takes place, it forms the third state. Here the urine is not higher coloured, but deposits more lithic acid. These three states every person, he thinks, experiences, in a greater or less degree, once a day. At night, he supposes, a febrile state, formed even in the most healthy, and the urine, he observes, is always paler. This, then, is the first state. The second takes place in the night-time, as, during sleep, there is a relaxation of that febrile state formed in the evening. The mid-day urine forms the
third

third state. He also supposes a like diurnal revolution to take place in the skin, being constricted in the evening, relaxed during sleep, and in vigorous action in the day-time. Hence there will be constantly an accumulation of acid in the night-time, to be thrown off the following day by the renewed vigour of the skin and kidneys.

From these observations, he concludes, that it is by the vigorous action of the skin and kidneys that any dangerous accumulation of acid must be guarded against.

The predisposing causes of gravel, he thinks, are, too great a proportion of solid, from the particular formation of the body; old age; excessive labour; high living; and the liberal use of fermented liquors; indolence; and too much heat applied to the body in general, or kidneys in particular. These act, partly by their debilitating effects, partly by the check they give to perspiration, from the accretion of the small vessels of the skin. Gout, he thinks, does not predispose to gravel; nor does he see any reason for supposing these two diseases to be essentially connected; because, when gravel is the primary disease, it is not accompanied by
gout;

gout; because it is often induced by other accidents; because it is not induced by gout, till it has been present some time, and the predisposing causes have been remarkably applied; and because we can otherwise account for their concurrence, since the same causes, applied through life, tend to induce both diseases.

All the predisposing causes induce the same change on the body, viz. the inactivity of the skin and kidneys; hence there will be an over proportion of acid matter in the system, and a deposition of lithic acid from the urine, so soon as it passes by the kidneys. This inactivity of the skin and kidneys, he therefore reckons the remote cause of gravel.

Our author now proceeds to shew, when it is most probable that the remote cause of gravel is present. As an over proportion of acid is gradually accumulating in the system, gravel, he thinks, must be a periodical disease, whose intervals will gradually shorten. When the paroxysms of the gout have become frequent, an accumulation of acid he supposes to have taken place. This is likewise the case, when Hypochondriasis comes on in old age, after the predisposing causes of gravel have been applied.

plied. Every old person, of a temperament predisposing to gravel, particularly if it has been hereditary in the family, may dread an accumulation of that noxious matter, which, sooner or later, will make its appearance, by inducing a fit of gravel.

When it appears that the remote cause of gravel is present, we must use every means for correcting this morbid condition, and preventing the body from relapsing into the same state. *1st*, By strengthening and assisting the digestive organs. *2^{dly}*, Avoiding such ingesta as increase the quantity of the matter we endeavour to expel. *3^{dly}*, Using such as have an opposite tendency. *4^{thly}*, Throwing out this matter. With regard to the first indication, he refers to the second part of his Treatise. The two next are fulfilled, by living as much as possible on alkalescent food, particularly fish, and using lime-water, aerated alkaline water, &c. Diluents seem to be of less service, in fulfilling the last indication, than might be supposed. Diuretics, he thinks, answer better; but he places more confidence in sudorifics and diaphoretics, particularly mercury and tartar emetic,

emetic, when given in such doses as not to excite nausea.

Our author now proceeds to make some observations on Dyspepsia, and opens the subject, by an enquiry into the efficient cause of digestion ; and on this he delivers the following opinion : That an incipient fermentation, by minutely separating the more solid parts of our food, in a manner similar to mastication, renders it more perviable by the gastric liquor, and consequently more easily digested.

But he thinks it equally necessary, to enquire into the proximate cause of the failure of digestion. Dyspepsia, according to authors, is owing, either to a diminution of the muscular action of the stomach, to a vitiated state of the gastric liquor, or to its deficiency. He adopts the last hypothesis, as he thinks it more probable that the occasional causes, which are all such as weaken the stomach or system, should rather produce a deficiency, than change the properties of the gastric liquor. Besides, although a dyspeptic cannot digest an ordinary quantity of food, without morbid symptoms, yet he will a smaller, perfectly ; and if he fast longer than usual, the fermentation in the stomach

mach will be corrected, and the digestion become complete. He also mentions his own case, when seized with anorexia. Having sucked an orange the night before, he next morning complained of nausea and oppression, referred to the stomach; which induced him to evacuate it, by irritating the fauces, about eight hours after he had taken the orange-juice, and found it unaltered and unmixed. This dyspepsia then, was clearly owing to deficiency of gastric liquor. He has also shewn, by experiment, that, by freeing the stomach of gastric liquor, anorexia can be nearly produced, and the sensation of hunger almost taken away. He brings further arguments in support of his opinion, from the manner in which the remedies act. Stimulants relieve the symptoms of dyspepsia, by producing a more copious secretion of the gastric liquor, certainly not in a vitiated state. But, when too often repeated, they increase the tendency to dyspepsia, by inducing debility in the stomach, which must tend to lessen its secretion.

Vomiting, he thinks hurtful in dyspepsia, as, with its morbid contents, it evacuates the stomach of its gastric liquor. But if the patient,
after

after vomiting, should fast till the gastric liquor flow in sufficient quantity, and only take a small quantity of food, the dyspeptic symptoms he thinks will not so readily recur. As frequent vomiting weakens the stomach, it ought to be avoided, and, in general, he observes, it can be so; for fasting alone will often remove dyspepsia. In young people, this disease is generally accompanied by a morbid irritability, which seems often to give rise to it. In such, and indeed in all dyspeptics, those remedies must be employed which act on the system in general, and which give the body the proper stimulus, without any subsequent injury; with this caution, that they be not applied in too great a degree, or when the body is too weak. These remedies are, exercise, cold-bathing, and the *usus modicus Veneris*. He also considers the regulation of the sleep, as essential to the cure of dyspepsia. Some is necessary, to refresh the body, while too much relaxes it. As the continuation of the febrile state, formed in the evening, debilitates the body, it must be avoided; and as this indication is fulfilled by repose, hence the advantage of going early to bed. With regard to the regulation
of

of the mind in this disease, he lays it down as a rule, to keep it constantly employed, but never to fatigue or overstretch it. The general view in this treatment, he observes, is more adapted to the young than the old ; for, where digestion is so weakened, that the body can hardly be supported, artificial means must be used to strengthen the digestive powers. Stimulants and tonics, while they relieve the urgent symptoms, increase the tendency to the disease ; and our author thinks, that, in the gastric liquor of other animals, introduced into the stomach, a remedy may be found which has not that inconvenience. He thinks it might also be employed with advantage, in those cases where it is necessary to nourish per anum. He concludes with observing, that, whether by promoting the action of the skin and kidneys, in the manner above directed, we shall be enabled to relieve a gravelly disposition, experience must determine ; but every age has told us, that living in such a manner as supports the necessary excretions, and, at the same time, tends to preserve the vigour of the digestive organs, is a method of avoiding a disease which so often makes the decline of life almost intolerable.

lerable. This can only be done, by steadily observing sobriety, and using that degree of exercise which nature has designed for us.

How far the ingenious conjectures, thrown out in this treatise, both with respect to calculous and dyspeptic affections, are well founded, we cannot pretend to determine. But the intelligent reader will readily perceive, that they have not only a claim to novelty, but that, if they shall be confirmed by future observations, they will lead to not a few important changes in practice. The consequences resulting from these, however, can only be determined by accurate and candid observations, confirmed by the concurring testimony of different practitioners.

IV.

A Treatise on the Mineral Waters of Harrogate, containing the History of these Waters, their Chemical Analysis, Medicinal Properties, and Plain Directions for their Use. By Thomas Garnett, M. D. Physician at Harrogate, &c. 8vo, London.

IN the first part of this ingenious work, Dr Garnett gives a short history of the discovery of the several springs, and a concise analysis of the authors who have treated of them.

He then proceeds, in the second part, to give an account of the sulphur water; and informs us, that there are four sulphur wells very near each other, at Low Harrogate, which differ only in the quantity of impregnating principles. That which is commonly used for drinking, is the strongest; the others supply water for the baths. Of these four sulphur wells, he calls the drinking well, the first; that about a yard to the right, the second; and, proceeding

proceeding still to the right, the third and fourth are found. The first, he observes, is the most strongly impregnated; the third the next; the second and fourth are considerably weaker than the others. Although the second and fourth have been frozen, yet the first and third resist the most extreme frosts, having a temperature several degrees below the freezing point. This, he thinks, is owing to the great quantity of salt with which they are impregnated. His experiments are confined to the first, as it is the only one used for drinking. With regard to its physical properties when taken up from the well, its water is perfectly clear and transparent, and sparkles when poured out of one glass into another. The taste is very saline, and at first disagreeable. It has a strong hepatic or sulphureous smell, similar to bilge water, or the scourings of a gun. When exposed to the open air, it soon begins to grow turbid, and acquires, in some degree, a greenish tint. A white powder is gradually deposited, and it loses its sulphureous smell. He found its specific gravity to be to that of distilled water as 1.0064 to 1.0000, the temperature of both being 60 degrees.

From a series of accurate experiments, our author concludes, that a wine gallon of the sulphur water, taken from the drinking well, contains

	oz.	dwt.	gr.
Of Muriat of soda, or common			
falt, - -	1	5	15.5
Muriat of lime -	0	0	13
Muriat of magnesia -	0	3	19
Carbonat of lime -	0	0	18.5
Carbonat of magnesia	0	0	5.5
Sulphat of magnesia, or Ep-			
fom falt -	0	0	10.5
<hr/>			
	1	11	10

Of Aeriform fluids,

	Cubic inches.
Carbonic acid gas, or fixed air	8
Azotic gas - -	7
Sulphurated hydrogen gas, or hep-	
patic air - -	19
<hr/>	
	34

He also observes, that large bubbles of azotic gas rise from the bottom of the bason,
and

and break at the surface two or three times in a minute; and that some of the wells in the bog above the village, afford it in a much greater quantity.

The Old Spa water, he observes, has a pleasant chalybeate taste; is exceeding clear, and sparkles when poured from one glass into another. Its specific gravity at the temperature of 60 deg. is to that of water, as 1.00014 to 1.00000. From a wine gallon of this water he obtained

		Grains.
Of Carbonat of iron	-	2
Sulphat of soda	-	3
Sulphat of lime	-	1.5
		<hr/>
		6.5
Of Aerial fluids,		
		Cubic inches.
Carbonic acid gas	-	15.75
Azotic gas	-	4.25
		<hr/>
		20

He next examines the Tewit water, which, he observes, is very clear, and sparkles rather more than the Old Spa water. Bubbles

of air, about the size of a walnut, are frequently seen to rise from the bottom of the spring, and break at the surface. These have been found to consist entirely of azotic gas. At a temperature of 60 deg. its specific gravity was as 1.00017 to 1.00000. It is not very brisk, but evidently chalybeate.

A wine gallon of this water afforded

	Grains.
Of Carbonat of iron	2.5
Sulphat of lime	4
	<hr/>
	6.5
Of Aerial fluids,	
	Cubic inches.
Carbonic acid gas	16
Azotic gas	5
	<hr/>
	21

The Crescent water, he observes, when first taken from the pump, and poured from one glass into another, sparkles considerably, and emits numerous bubbles of air, which attach themselves to the inner surface of the glass. It is not perfectly transparent, but
more

more or less turbid at different times: in general, it has a whitish cloudy appearance. The taste is saline, and rather vapid, imparting a certain smoothness to the palate. It is much more pleasant than the Sulphur water: a chalybeate taste is also very perceptible. It has an evident sulphureous smell, or hepatic odour, though not near so strong as that emitted by the Sulphur water. Its specific gravity he found to be to that of distilled water, as 1.002 to 1.000, the temperature of both being 60 deg.

On the 19th of August 1790, he compared the temperature of several of the springs, and obtained the following result.

	Of Farenheit.
Temperature of the atmosphere	60 Deg.
— the Crescent water	52
— drinking Sulphur well	54
— well next the drink-	
ing Sulphur well	57
— lowest Sulphur well	56
— St Magnus's well	51

From a series of accurate experiments, a wine gallon of Crescent water seems to contain

		dwt.	gr.
Of Carbonat of iron	-	0	2
Carbonat of lime	-	0	3.1
Muriat of magnesia	-	1	21
Muriat of soda	-	5	17
Sulphat of magnesia	-	0	8
		<hr/>	
		6	51.1

Of Aerial fluids,

		Cubic inches.
Of Carbonic acid gas	-	20.8
Sulphurated hydrogen gas		13.6
		<hr/>
		34.4

After relating his experiments on these different waters, which afford a more accurate and just analysis of them than has hitherto been presented to the public, he subjoins the following table, shewing, at one view, the contents of a wine gallon of each of them, as well as of the Crescent water, on which he lately published, in a separate treatise, some experiments and observations.

Exhibiting the CONTENTS, in a Wine Gallon, of each of the Harrogate Waters.

Names of the Waters.	Specific gravity.	CUBIC INCHES.			G R A I N S.						
		Carbonic acid gas.	Azotic gas.	Sulphurated hydrogen gas.	Muriat of soda.	Muriat of lime.	Carbo- nat of magnesia.	Carbo- nat of iron.	Sulphat of mag- nesia.	Sulphat of soda.	Sulphat of lime.
Sulphur Water,	1.0064	8	7	19	615.5	13	91	18.5	5.5	—	10.5
Crescent Water,	1.002	20.8	—	13.6	137	—	45	3.1	—	2	8
Tewit Water,	1.00017	16	5	—	—	—	—	—	2.5	—	4
Old Spa,	1.00014	15.75	4.25	—	—	—	—	—	2	3	1.5

Besides these, there are a great variety of waters at Harrogate, of which he has not yet been able to make an accurate analysis, but which he expects to lay before the public in the course of another year. Our author concludes this part of his treatise with some observations on the different permanently elastic fluids with which these waters are impregnated. He has given the following ingenious explanation of the manner in which azotic gas is united with water, since they cannot be combined by agitation. He supposes the water to absorb atmospheric air, and that its oxygen is attracted by the iron which is thus rendered soluble in fixed air, while the azotic gas will be left loosely attached to the particles of water, and ready to break in the form of bubbles. This, he thinks, also accounts for oxygen, or atmospheric air, being never found in chalybeate waters.

M. Gengembre, he observes, was the first who, by dissolving sulphur in inflammable air, formed hepatic air, or sulphurated hydrogen gas. This gas is also procured from *hepar sulphuris* and pyrites, by the affusion of the mineral acids. But M. Fourcroy has shewn, that

that dry liver of sulphur emits no fetid odour ; that it acquires this in proportion as it imbibes moisture ; that the production of this gas is owing to the decomposition of water ; and that the acid employed in obtaining it from dry hepar, is only effectual in proportion to the water it contains. As neither sulphur nor alkali can separately decompose water, this effect is shewn by M. Fourcroy to be owing to the powerful attraction with which the alkali tends to unite with the sulphur, when converted into sulphuric acid. In order to undergo this change, the sulphur must be combined with oxygen ; and its hydrogen gas being thus let loose, dissolves and carries with it a portion of the sulphur. But, according to M. Chaptal, one of the properties of sulphurated hydrogen gas is to unite with the oxygen of atmospheric air, and form water, depositing the sulphur it held in solution.

Now, says our author, if we suppose the water to be originally impregnated with atmospheric air, when it meets with the hepatic air, this last will unite with the oxygen, and form water, while the azote will be left loosely attached to the particles of water, in the
same

same manner as in the chalybeate springs. But there being a greater quantity of hepatic air than will saturate the oxygen of the atmospheric air dissolved by the water, the remainder retains its peculiar properties, and gives the water its sulphureous smell.

He next inquires into the origin of the sulphurated hydrogen gas, with which the Harrogate waters are impregnated; and observes, that although it may be derived from the decomposition of pyrites, yet as, in this case, these waters would be impregnated with a good deal of vitriolic salt, he would rather ascribe its origin to the decomposition of vegetables, which we know is one of the greatest sources of the formation of sulphur; and it is likewise well known, that hydrogen, which forms a considerable part of vegetables, is continually escaping from bogs and ponds during their decomposition. This hydrogen, he then supposes, dissolving a portion of the sulphur, will be converted into hepatic air, and impregnate the water it meets with, giving it peculiar properties.

Our author opens the third part, by some remarks on the air, situation, and amusements
of

of the place ; and then proceeds to examine the medicinal virtues of the waters : And, first, of the chalybeates.

Iron, he observes, is the only metal which seems naturally friendly to the animal body ; and he even suggests an idea, that it perhaps derives its origin from the animal and vegetable powers ; at least it seems to make a part in organic bodies. Its effects, he thinks, cannot be explained upon the stimulant or tonic power it is said to possess ; but that it acts a much greater part in the animal œconomy. As the blood acquires its red colour from its exposure to the air in the lungs, from which nothing but oxygen is absorbed, it seems probable, he observes, that the red particles of the blood consist of iron calcined by oxygen, and reduced to the state of red oxyd of iron.

Hence it appears, that chalybeates will not only increase the quantity of red particles on which the stimulant and tonic powers of that fluid depend, but will enable it to decompose a larger quantity of the oxygen, which is received by the lungs in respiration, and thus occasion a greater evolution of heat ; and he thinks it not improbable, that a change to a
purer

purser air will not produce the desired effects, without the administration of chalybeates at the same time.

Iron dissolved by fixed air, he observes, seems to be its most useful preparation ; for although, when united to the mineral acids, it may enter the blood more readily, and in greater quantity, yet they are more difficultly decomposed than carbonat of iron : and, with respect to quantity, experience shews us, that small doses of iron produce better effects than large ones. The fixed air by which this metal is held in solution, is an agent possessing no small power over the human frame ; as water impregnated with it, exhilarates even to a degree of intoxication : in mineral waters it holds some of their most active principles in solution. The medicinal powers of azotic gas, he observes, have by no means been investigated ; but from its abundance in nature, its being a principal part of nitrous acid and volatile alkali, it would seem to possess no ignoble place in the animal œconomy.

Chalybeate waters, our author thinks, are useful in all diseases depending upon debility, where the solids are relaxed, and the system weakened ;

weakened ; and in the numerous class of nervous disorders, they produce the happiest effects. If it be difficult to eradicate these complaints, it is certainly possible to point out proper methods for preventing them, and to fix a boundary to their ravages. They almost all depend upon debility, and are induced by every cause that can relax and weaken the habit ; but the most common cause, the effects of which are the most difficult to be removed, is to be sought for in the mind.

In such cases, next to the regulation of the passions, exercise in the open air without fatigue, and agreeable amusements without excess, promise the most relief. To these Dr Garnett recommends the use of the Tewit well, and Old Spa ; and, in order to prevent costiveness, the Sulphur water now and then. In such cases, he has seen the Crescent water of great service. The cold bath, properly used, promises the best effects. He also ranks, among the diseases of women depending upon relaxation, cases where the natural discharge has been obstructed, or immoderately increased. The chalybeate waters have afforded relief in the stone and gravel, and in the atonic gout.

They

They may be also employed with advantage in bilious complaints, and in some stages of consumption ; but in these he would rather employ the Crescent water, as its salt will, in some measure, counteract the stimulant effects of the iron.

Chalybeates are improper, where a plethoric or vigorous state of the system prevails, where the vessels are full of blood, and where there is a tendency to any inflammatory disease. In these cases, our author observes, Harrogate affords a safe and easy remedy by the Sulphur water.

The salts with which this water is impregnated, render it a mild purgative ; its hepatic air is one of the most powerful remedies against diseases of the skin ; and it speedily and easily carries off the effects of intemperance. In persons predisposed to apoplexy, if properly administered, so as to keep the body regular, and rather open, it will be found one of the best preventives of that dreadful disease. But instances are not wanting, of persons predisposed to apoplexy, having a fit brought on by the improper use of the Sulphur water. Patients
of

of this class ought equally to avoid the warm and cold baths.

But it is principally in herpetic affections of the skin, he observes, that the Sulphur water is used. These complaints, he thinks, are yet little understood, being all confounded, even by medical practitioners, under the general name of Scurvy; whereas they are perfectly opposite in the symptoms, appearance, and method of cure.

He agrees with Mr Bell, in arranging them under the following species:—1. Herpes farinosus, or dry scaly ulcer. 2. Herpes pustulosus, which includes the crusta lactea and tinea capitis. 3. Herpes miliaris: of this variety is the eruption called the Ring-worm. 4. Herpes excedens: this includes the ulcers called depascent and phagedænic. These diseases, he believes, are less connected with a diseased constitution than is generally imagined. He supposes that the perspirable matter is not poured out on the surface of the cuticle, but under it, and then oozes out as through a sieve. Now, if perspiration be any how stopped, there will be an accumulation of this matter under the cuticle, where it will cause itching, redness, and slight

inflammation; while, in many cases, portions of the cuticle will be forced off, in the form of a scaly eruption.

The lepra and elephantiasis have yielded to the use of the Sulphur water, after other remedies have been tried in vain.

In the treatment of all these disorders, the principal circumstance to be attended to is, that not only the parts affected, but the whole skin, be kept as perspirable as possible. To this end, the frequent use of warm bathing and gentle friction, are singularly serviceable. With respect to the internal use of this water, he observes, it often answers better when taken as a gentle laxative, than as a powerful purgative.

The lumbricus and tænia are frequently evacuated by it, when taken as a brisk purgative; but the ascarides, which generally lie low in the rectum, are most effectually destroyed by the water injected into the intestines.

Cases of hæmorrhoids, and of obstinate and habitual costiveness, have been much relieved by the Sulphur water; and the warm bath is of use in chronic rheumatism. To scrophula, the Crescent water is the best adapted, as the
falt

salt it contains is just sufficient to make it active as a gentle stimulus upon the excretories, without operating by the intestines, while the iron will tend to remove the debility, which, if not the cause of the disease, always retards its cure. With the same intention the cold bath at Low Harrogate may be used.

The effects produced by sulphur and hepatic air upon lead, would seem to recommend these waters as a remedy in the colica pictonum.

In the fourth and last part of this work, he gives directions for the use of these waters. Patients, who are to use the chalybeate waters, should prepare themselves, by previously drinking the Sulphur water for some days, and always take care to avoid becoming costive: the use of these waters at the same time are incompatible, as they decompose each other. The effects of the chalybeate waters may, in general, be much promoted by the use of the cold bath, where there is nothing to forbid it.

If the Sulphur water be wished to act as a purgative, he advises patients to drink two, three, or four glasses, according to the difference of constitution, using gentle exercise for about a quarter of an hour between each glass. Its

operation may be quickened, by dissolving, in the first glass, some purgative salt. The patient must guard against drinking it cold when he is warm; and as it agrees with some better when heated, this is best done by mixing with it some boiling water. Its use ought to be left off gradually; employing, for the space of two or three weeks afterwards, more abstemious diet, and guarding against costiveness.

With respect to bathing, he advises no one to go into a bath heated above 98 deg. of Fahrenheit. After he has been in a few minutes, the temperature may be raised three or four degrees higher; and the degree of heat always ought to be regulated by a thermometer. At first, a patient should remain in it only five minutes; and he may gradually increase it to twenty. The bath may be used every second or third night. After coming out of the bath, if it be necessary to encourage a free perspiration, the patient must go immediately to his bed, which is previously to be warmed; and take from time to time a little wine whey, as long as he wishes the sweating to continue. If profuse perspiration be not the object, he may take a light supper, and
must

must let himself cool gradually before he goes to bed.

It is impossible, he observes, to give any general rules concerning diet; but he recommends those whose diseases depend upon, or are accompanied with debility, to observe a generous temperance, rather than a severe abstinence. Their dinner should consist of plain animal food, with a due proportion of vegetables during dinner. Water is the best drink: a few glasses of wine may be taken after it. For breakfast, tea is improper, as it decomposes the chalybeate waters.

Another class of patients, who labour under diseases accompanied with a plethoric or inflammatory disposition, ought to live more abstemiously. They should drink plentifully of warm diluents; and the solid part of their food should consist chiefly of vegetables, and a small quantity of animal food, at dinner. The best time for eating fruit is before dinner; and, if ripe, and taken in moderation, there can be no objection to the use of it. When suppers are taken, they should be as light as possible.

After shewing the advantages to be derived from exercise, he observes, that when patients are weak, they should use it very gently at first.

Begin with gentler toils, and, as your nerves
Grow firm, to hardier by just steps aspire.
The prudent, even in every moderate walk,
At first but faunter, and by slow degrees
Increase their pace.

ARMSTRONG.

The best time for exercise is before dinner, as it increases the appetite; and besides, after a full meal, it disturbs digestion. Riding, he thinks the best method of taking exercise, as it fatigues less than walking.

Our author concludes, with observing, that although mineral waters often produce astonishing cures, yet their good effects are seldom evident at first, as they always require some time of trial; and patients ought not to go away dissatisfied, if they have not received much benefit in the space of a week or a fortnight, but should reflect, that where diseases have continued for a long time, it would be folly to expect that they could be easily and speedily removed.

V.

An Account of the Efficacy of the Aqua Mephitica Alkalina, or Solution of Fixed Alkaline Salt saturated with Fixible Air, in Calculous Disorders, and other Complaints of the Urinary Passages. By William Falconer, M. D. F. R. S. and Physician to the General Hospital at Bath. 8vo, London.

THE merit of the original discovery, that alkaline salts were capable of being completely neutralized by fixible air, Dr Falconer thinks is due to Mr Bewly, of Great Massingham, Norfolk. But the honour of the discovery of its most important use, belongs, he tells us, to Benjamin Colborne, Esq. who having been a severe sufferer from calculous complaints, was convinced, by experience, of the inefficacy of all the boasted lithontriptics. From observing the solvent powers of alkaline salts upon uri-

nary calculus out of the body, and by remarking the changes produced by their internal use on the urine of those afflicted with these disorders, he was induced to make a trial of the remedy now under consideration; and the event was much beyond his hopes. The disagreeable taste however of the alkali, and its caustic, septic, and irritating effects on the animal system, he thought might be destroyed, by combining it with fixible air, as it forms with the alkali a neutral salt, perfectly mild in its nature, agreeable to the taste and stomach, and powerfully antiseptic. At the same time, their combination is so loose, that the alkali is easily separated from the air by any other acid it may meet with. He moreover found, by experience, that this combination possessed no inconsiderable dissolvent powers upon human calculi out of the body. Hence he was induced to make trial of it himself, and to recommend it to others; and Dr Falconer trusts, that experience has proved that his expectations were not ill founded.

Dr Falconer recommends the following method, as the most convenient for making the alkaline solution. Put two ounces and a half,
Troy

Troy weight, of dry salt of tartar, into an open earthen vessel, and pour thereon five quarts, Wine measure, of the purest water, and stir them well together with a clean piece of wood. After standing 24 hours, carefully decant from any indissoluble residuum that may remain, as much as will fill the middle part of one of the glass machines for impregnating water with fixible air. The alkaline liquor is then to be exposed to a stream of fixible air, in the usual manner. When the alkaline liquor has remained in this situation till the fixible air ceases to rise, a fresh quantity of the materials for producing it should be put into the lower part of the machine, and the solution exposed to a second stream of air, and this process repeated four times. When the alkaline liquor shall have continued about 48 hours in this situation, it will be fit for use; and should then be drawn off into perfectly clean bottles, and closely corked up. The bottles should then be placed, with their bottom upwards, in a cool place; and, with these precautions, it will keep several weeks good. The quantity of alkaline solution above directed to be mixed, is judged to be sufficient to fill the glass machines of the
common

common size twice, without pouring off the liquid so deep as to hazard making the solution turbid, by stirring up the indissoluble residuum which is precipitated at the bottom of the vessel. When properly prepared, the alkaline mephitic water should be perfectly clear, and rather sparkling, of an acidulous taste, and totally free of that disagreeable impression which alkaline salts make upon the tongue and throat.

For most cases, he observes, a pint in 24 hours may suffice. The times of taking three doses a day, are, pretty early in the morning, about noon, and about six in the evening. If twice a day, about noon, and in the evening; and, if once, which in many cases seems a preventive, about an hour and a half before dinner. Common sense dictates, that it should be taken when the stomach is least loaded with victuals.

Dr Falconer does not find a rigid adherence to any particular diet necessary, and only prescribes moderation and temperance; although he thinks it would be better to abstain from acedcent food, for some time before and after taking the doses of the alkaline solution.

The

The only effect of this medicine, besides that most to be wished for, is to keep the body gently open : in one case only, it proved a pretty strong diuretic. Should it prove cold or flatulent to the stomach, which sometimes happens, the addition of a small portion of any spirituous liquor, or warm milk, in the proportion of about one-fourth, tends much to reconcile it to the stomach, without impairing its good qualities.

If the urinary passages be very sore or tender, and the system very irritable, opiates will become necessary ; which however are to be laid aside, when the pain and other urgent symptoms have so far ceased, as not to cause any great uneasiness.

There are a great many cases related, which tend to prove that it is an almost certain remedy against calculus ; that, if it do not improve or repair an injured constitution, its use is at least perfectly innocent ; that old age is no objection to its use ; that, by continuing it for some time, the tendency to produce calculus may be subdued ; that, in some cases, it has proved a solvent of a stone already formed in the bladder ; and that it is serviceable in many other diseases of the urinary passages.

Its

Its efficacy is particularly shewn, in complaints arising from the acrimony of the urine.

From a great many important and accurate cases, we shall select the following, as proofs of the benefit to be obtained from it.

Case XXIII. communicated by Mr PERRY.
—“ Thomas Shell, aged 13 years, in September 1787 applied to me, at the request of Mr Colborne, to be sounded for the stone. He had great pain in making water, which came away by drops. He also complained of a bearing weight at his fundament, where nothing uncommon was to be perceived. From his symptoms, I sounded him, and found a stone in his bladder. I desired him to inform Mr Colborne of this circumstance; which he did, as I was informed by that gentleman; who humanely took him under his care, and administered the solution, with more than usual good effect. I believe the medicine was used for twelve months, at times. Within these ten days the lad called on me, with the greatest pleasure, to sound him again; which I did repeatedly, and could not perceive any stone; nor did he complain of the least symptom of
it,

it, December 4. 1788. He took the water two months before he found any benefit.

“ December 1. 1791.—This patient has not taken any of the mephitic alkaline water since December 1788. He is now in perfect health, and has been so ever since the time before mentioned.”

This case, Dr Falconer observes, shews, in the most satisfactory manner, that the alkaline solution possesses a power of dissolving urinary calculi ; and he thinks it probable, from the last account, which states that the patient continues well, notwithstanding his leaving off the alkaline water for three years, although the whole time he used it did not exceed one year, that the disposition to generate calculus, is sooner overcome by this remedy in young subjects, than in those who are advanced in life.

Case XXVII.—“ In the year 1779 I was attacked with a strangury and total suppression of urine, for several hours, without being able to assign any cause ; but, after taking emulsions and mucilages, I was enabled to pass urine again. I had many returns of the complaint ; and, in particular, one time I was advised to
drink

drink some gin and water, which I soon found to increase my pain, and cause greater irritation to make water. I was put into a warm bath, without any good effect, and a surgeon drew off my water by a catheter; but he so wounded the passage near the prostate gland, that a great quantity of blood passed off with the urine. He told me I had a stone in my bladder. Being rather alarmed, I then consulted the late Mr Else, who, on passing a bougie, told me my complaint was not calculous, but from a stricture. I also consulted Mr John Hunter; who likewise told me I had a stricture, and advised me to wear bougies. I did so; but not being able to indulge during wearing them, they frequently irritated the diseased part very much. Here I must observe, that, on my introducing the bougies, they have seemed to rub against some very hard rough substance, near the neck of the bladder; but, on withdrawing them, I never could perceive any impression had been made on them. During my wearing bougies, from 1779 to 1786, I had many total stoppages of urine; from which I could always relieve myself, during the first part of the above period, by introducing a catheter;

theter ; but afterwards, the passage became too narrow for the smallest catheter I could get, and I made use of a small bougie. From 1786 I left off the use of bougies, and continued to make urine with difficulty ; but had not any total stoppage, until December 1790, when, having drank one evening rather freely of some very strong brandy and water, I had frequent irritations to make water, which I then passed with some difficulty ; and the next evening, being again engaged in company, I very imprudently retained my urine a long time, (though irritated to pass it) until I felt the usual symptoms of suppression. I had no sleep during the night ; and being obliged to go from home five miles, I went on horseback ; and being a very wet and cold day, I felt a chill in my skin, and made many attempts to pass my urine, but without effect. I returned home, ordered a warm bath to be got ready, and sent for a physician and a surgeon, who, by the use of the warm bath, bleeding, anodynes by the mouth and clyster, and other remedies, relieved me from the most distressing painful spasmodic efforts to void my urine during

ring the suppression (which continued twenty-eight hours) I had ever experienced. Then the urine began to flow by drops, and my bladder was emptied in about six hours. Here I must mention, that different sized catheters and bougies were attempted to be introduced without effect. At the end of a month from this time, I was recovered from the weakness and irritability consequent on the suppression of urine, when I found the stricture and irritability of my urethra in the same state as previous to the attack. By the suggestion of a medical friend, who was then at Bath, my urine was tried with paper stained with litmus, and found to be surcharged with acid; and, by his recommendation, I began taking the alkaline mephitic water, (prepared according to the directions in Dr Falconer's pamphlet), from which I soon found my urine pass with more ease, and the stream rather fuller. By repeated trials of my urine during my taking this water, I have found it has effectually prevented my urine being acid, (for the litmus test-paper is not altered in colour when dipped in it), which I, as well as the medical gentlemen who attended me, think

WAS

was the principal, if not sole cause, of the pain and inconveniences which have, at various times, been the consequences of the stricture.

“ I continue to drink from two-thirds of a pint to a pint of the water in a day, and have the happiness to think I now pass my urine with as much ease, and nearly as much freedom, as I ever did in my life. I abstain from no food whatever: I drink mild beer and wine at dinner; and only avoid spirits, fruit, and acids. I have not even found the aqua mephitica to disagree with me. I have a good appetite, and am well in health.

“ P. S. When I have been in London for a short time, and have omitted to take the water, I have felt a return of the stricture; but on going into the country, and again taking the usual quantity of the water, it has always been immediately relieved.”

This case, Dr Falconer observes, is a disorder of the urinary passages, attended with great pain and stricture, perhaps some disease of the prostate gland, but probably without any formed calculus. This case, he thinks, evinces clearly, that the pain was caused by the acrimony of the urine, and the disease kept

up, if not induced by it. When this acrimony, which was evidently of the acid kind, was neutralized by the alkaline water, both the pain and stricture abated, and returned when that was omitted. He also reckons this case the more important, as it proves that the alkaline water is capable of giving permanent relief, if not of effecting a cure, in complaints of the urinary passages, not proceeding from calculus, provided a trial be made before any irreparable injury be done to the parts.

In this treatise are related some experiments made by Mr Colborne, to discover the solvent power of the mephitic alkaline water upon calculi, by immersing them in it; and they seem to prove, that, at a medium, after the calculi have been immersed 31 days, they lose half their weight; and he observes, that they were corroded in holes like a worm-eaten piece of wood, but externally preserved their original figure, till they all at last fell to pieces.

The following experiments by the same gentleman seem to prove, that the urine of those taking the mephitic alkaline water, has the power of dissolving calculi.

October

October 16. 1786.—A fragment of calculus, weighing 55 grains, was put into a large wide-mouthed vial, and upon it was poured daily the first urine that was passed, after taking a dose of the mephitic alkaline water, by a person that was in the course of taking it every day. The vial was set in a moderately cool place, and the urine regularly changed.

			<i>Loss of weight.</i>
Oct. 16. 1786,	it weighed	55 gr.	
Nov. 16.	-	53	2 gr.
Dec. 16.	-	46	7
Jan. 16. 1787,	-	36	10
Feb. 16.	-	26	10
Mar. 16.	-	22	4
Apr. 16.	-	18	4
			—
In six months it had lost		—	37 gr. Total loss.

January 24. 1787.—An entire calculus, weighing sixty grains, treated as above, in the space of two months was diminished in weight eight grains; and in another month the whole diminution was 25 grains. The laminæ that form the calculus began to separate, and it appeared that the action of the solvent had

penetrated much deeper in one part than in another. Another weighing 54 grains, treated in the same manner, in the same time lost 17 grains.

A fragment of the same calculus, used in the first of these experiments, had every day poured upon it the urine of a healthy person, who never had any signs of gravel, and who was not in the habit of taking any medicine whatever; and from October 16th to December 16th, it had lost none of its original weight. From the latter end of this month the same urine remained upon it until January 26th; during which time the urine had become fetid and alkaline, the calculus had fallen into three pieces, and lost in weight ten grains. From that time the urine was changed regularly every day.

Gain of weight:

Jan. 26. it weighed	-	35 gr.	
Mar. 26.	-	$36\frac{1}{2}$	$1\frac{1}{2}$ gr.
Apr. 26.	-	$37\frac{1}{2}$	1

The same ingenious gentleman has also made the following remarks on the effects of the mephitic alkaline water.

The

The urine of most people subject to the stone, and of people in general, will turn paper stained with the juice of turnsole, red ; but the urine which is made first after taking the mephitic alkaline water, in those persons who have taken it for some time, will change the test-paper to a blue colour. But if the urine of the patient, previous to its use, turn the paper blue, it is generally fetid and putrescent. In such cases, the alkaline water will take off the foetor, and abate the general symptoms ; but must not be depended upon for a cure.

Mr Colborne advises persons subject to the stone or gravel, to observe accurately the state of their chamber-pot, whether it keeps free of fur or other adhesions to its bottom and sides, this being the principal criterion by which the increase or amendment of the complaint can be ascertained. The urine of almost every person in health, if suffered to remain for 24 hours in the chamber-pot, forms more or less incrustations on its bottom and sides. This, he believes, never takes place in the urine of those who are in the habit of taking the mephitic alkaline water.

As this medicine is so efficacious in obviating the acrimony of the urine, he thinks it seems likely to be of service, if given immediately after the operation of lithotomy, as it is well known that the healing of the wound is often much retarded by the irritation of that discharge.

Dr Falconer now proceeds to relate experiments of his own; some of which tend to corroborate those of Mr Colborne; others to prove the antiseptic powers of the mephitic alkaline solution; while, from others, he concludes, that two ounces of this solution contain thirteen ounce measures of fixible air; which quantity he shews to be to that contained in salt of tartar, as twenty-four to eleven.

Dr Falconer then proceeds to draw some conclusions from these cases and experiments; and observes, that although he thinks it probable that the principal advantage derived from this remedy is owing to the change it produces on the urine, yet the experiments shew that it possesses considerable powers as a solvent of the calculus. This, he thinks, depends upon a double elective attraction, the alkaline salt attracting the acid of sugar, one
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of the component parts of calculus, while the other, the calcareous earth, is united to the fixible air. The former of these compounds is perfectly soluble in water; and the other also, when the fixible air is redundant.

The effects ascribed to the waters of Carlstadt, in Bohemia, seem to prove, that the fossil alkali, prepared in the same manner, might possess like powers: And he thinks it probable, that alkaline salt, saturated with fixible air, when crystallized, might be equally effectual with the solution, while it would be a more convenient form for use: But of this, he observes, he has had no experience.

VII.

A Treatise on the Digestion of Food. By G. Fordyce, M. D. F. R. S. Fellow of the Royal College of Physicians, and Reader on the Practice of Physic in London. 8vo, London.

LIVING beings, Dr Fordyce observes, both of the vegetable and animal creation, constantly expend some part of their fluids or solids, or both, when they are exerting any action, or performing any function of life; and, during a certain period of their lives, they are acquiring new parts, and increasing in bulk. It is necessary, therefore, that food should be employed to supply matter for this formation and increase.

Our author here remarks one great distinction between animals and vegetables; for animals have organs of digestion, in which the food remains for some time before it gets into the general system; while, in vegetables, the
food

food passes directly into the general system, without being detained, or suffering any previous alteration.

He thinks it reasonable to suppose, that the food is stopped in the organs of digestion, in order to undergo some change; and as, in different animals, the organs of digestion are various, it is therefore probable that the changes which take place, in different animals, are different; or that the mode of life, or some other accident, renders a different apparatus necessary for this process. There are other substances, besides the food, which are poured into the cavities of the organs of digestion, from the vessels of the animal himself, which serve either for assisting the change, or enter into the substances formed.

Our author, therefore, divides his subject into the structure of the organs of digestion in the human body; the substances which are applied to the food during the time of the digestion in the human body; the structure of the organs of digestion, and the substances applied to the food in other animals; the qualities of the substances to be formed by the digestion; the substances that are capable of being digested;

gested; their qualities; and if such qualities be different from those of the substances to be formed. He, lastly, proposes to consider the manner by which the peculiar qualities of the food are to be taken away, and the qualities of the substances to be formed given to it.

Accordingly, after giving an accurate, though concise, anatomical description of the organs of digestion, he proceeds to consider the substances applied to the food during the digestion.

As he has often occasion to use the word *mucilage*, he defines it to be a class of animal and vegetable substances, solid, brittle, inflammable, decomposable by heat, capable of being combined with water in their natural state, capable of being combined with water by decoction or Papin's digester, so as to form a fluid; and he remarks, that he never means to annex the term to a solution of this solid substance in water.

This class of substances, and no other, is subject, he observes, to a particular chemical change, called Coagulation. The only difference that he supposes coagulation to produce in the properties of mucilages, is in their solubility in water, by occasioning them to separate,

rate, partly, or entirely, from the water with which they were combined ; that is to say, if the whole water be separated from a portion of any of them by coagulation, and from another portion by a heat not capable of coagulating it, they are perfectly undistinguishable ; excepting that the portion which was dried without coagulation, will combine with water again, in the same manner that it was combined before ; while that part which was coagulated, will not. All colourless animal mucilages, he observes, are exactly the same in all their properties after coagulation ; which proves, that they differ only in their solubility in water.

The saliva, he supposes to be a fluid, consisting of water, with which a colourless mucilage and saline substances are combined. Saliva is viscid ; difficultly diffusible in water ; and coagulable, but not readily. Its salts are probably sea salt and sal ammoniac. He endeavours to refute Dr M'Bride's idea, of saliva being a ferment ; and denies that it is secreted in very large quantities during deglutition ; and is of opinion that saliva is of little or no effect in the digestion of the food in the stomach.

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The next substance applied to the food, is the gastric juice. The juices secreted in the stomach, he observes, are by no means homogeneous; and although it be difficult to separate them, yet we have a distinct idea of each. They seem to be a mucus, having properties similar to the mucus in other parts; a juice flowing from the exhalents, which is water containing the neutral salts of the blood; and a solid or fluid, difficultly diffusible through water, having a strong power of coagulating many animal, and perhaps some vegetable, mucilages. In disease, he thinks the stomach has a power of forming other substances. In the duodenum, the bile is applied to the food; probably, he observes, after it has undergone some process in the stomach.

The bile he has found to be a compound of mucilage and water. The mucilage is not in itself coagulable; but there is sometimes a mixture of coagulable matter, perhaps serum along with it. It is capable of being diffused through any quantity of water; but, in the gall bladder, it is united with such a quantity, as to render it a fluid of oleaginous viscosity, and then it is not more putrescent than the se-

rum

rum of the blood ; but, if diffused through a large quantity of water, it putrefies much more readily. This mucilage is very different from the colourless animal mucilages in its sensible qualities ; and it is not coagulated, but decomposed by acids ; a part being precipitated, which is resinous, or at least which melts in a moderate degree of heat ; and is soluble in alkohol, although incompletely. Our author supposes that it is always decomposed in the duodenum, as it would be otherwise carried into the system, where it is never found, unless in a morbid state of the body.

The pancreatic juice, he observes, it is difficult to collect ; but it seems somewhat similar to saliva in its properties. The fluids formed in the other glands found in the duodenum, have hitherto eluded all researches ; but he observes, that there is evidently mucus formed on its surface.

He next proceeds to consider, what substances are capable of being employed for nourishment. Vegetables, he observes, afford nourishment for animals, but vegetables themselves are nourished ; and he supposes water and pure
air

air to be sufficient for the nourishment of vegetables.

From some facts and experiments, he concludes, that certain animals may live on pure air and pure water. The fluids of vegetables he considers as of two kinds; such as, on evaporation, leave a mucilage behind, and such as leave none. All the solids of vegetables consist of mucilages combined with water, excepting resins and other oily substances.

He considers the whole nourishment which animals derive from vegetables, as consisting in their mucilages, and **that** none of the resinous parts are digested.

All mucilages of vegetables, he thinks, are capable of affording nourishment to some one species of animal. In like manner, he divides all animal fluids into such as contain, and such as do not contain, mucilage. Animal solids, according to our author, consist of mucilage and water; and he endeavours to shew, that all animal and vegetable solids and fluids, containing mucilage and expressed oils, and possibly essential oils, in the **form of** resins, are capable of giving nourishment to some one or other species of animal.

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He next considers, what substances are capable of giving nourishment to the human body.

“ I am not (he says) to enquire what is the
“ natural food of man, who has no natural food ;
“ but into what he has been able to render
“ proper for his nourishment, and been able to
“ produce for himself, by his own industry.”

The first he takes notice of, is a vegetable mucilage called Farinaceous matter. This is found more particularly in the seeds of the gramina, which also contain a sugar, a mucilage very apt to ferment, and an astringent juice. Farinaceous matter, he observes, is also contained in the seeds of the legumina, and in many other seeds ; such as, the nut-tribe, in fruits, in the stems of some plants, and in many roots. In all these, he considers the farinaceous matter as exactly the same, and consisting of a mucilage, combined with water, so as to form a solid. It is hardly soluble, he observes, in water heated to less than 100 deg. of Fahrenheit's thermometer, unless some fermentation has taken place in it. It dissolves in water, in a heat from 160. to 180 deg., forming a viscid solution. A heat above 180 deg. coagulates it, whether it be applied immediately
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to it, or to a solution of it in water. Men, he observes, generally coagulate it before they use it as food.

The next substance he treats of, taken from vegetables, which men use for nourishment, is sugar. This, he observes, is found in every vegetable production except the fungi, although its sources for the purposes of food are confined to some of the fruits. Sugar, when separated from all extraneous matter, he imagines to be a mucilage capable of combining with water, so as to form crystals which are readily soluble in nearly half their weight of water, in a heat of 50 deg. forming a viscid solution, which is readily diffusible through any quantity of water, in any heat the water will bear.

The other substances capable of giving nourishment to man, are the expressed oils; gums, he here means, such as are composed of a mucilage not coagulable by heat, and neither disposing to, nor preventing fermentation; a mucilage, which is not only in itself very apt to ferment, but is also extremely powerful in leading other matters into fermentation; another mucilage which resists fermentation; and the native vegetable acid: He is not certain
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if the two last be digestible. The fungi, as food, he classes with animals.

He next proceeds to point out the different substances found in animals, proper for food, or capable of being digested. All the solid fibres of animals which afford nourishment, he supposes to consist of a mucilage combined with water, so as to form a solid, not diffusible through more water, if it be applied in a moderate degree of heat, without a fermentation taking place. They are all coagulable by heat, and many other applications; when freed from extraneous matter, they are colourless, insipid, and inodorous; and agree in their chemical properties, yet differ much in their easiness of digestion.

He also supposes all animal fluids, consisting of mucilage and water, as capable of digestion.

These substances, in the organs above described, and with the admixture of the fluids enumerated, are converted into chyle, which is afterwards formed into blood.

As far as experiments have been carried, he thinks that chyle consists of three parts: a fluid that coagulates upon extravasation; a fluid that is coagulable by heat; and a part, con-

sisting of globules, which render the whole white and opaque.

A great many substances, he believes, may enter the lacteals along with the chyle, even solids, reduced to fine powder; and from some facts, he concludes, that the lacteals would seem to be ready to take in many things not digested, but not all.

As the essential parts of the chyle are so different in their properties from the substances employed for food, a change must have taken place; and he now proceeds to examine the process by which the food is formed into chyle and blood.

He begins this part of his subject, with shewing that the opinion, that it is owing to trituration dividing the food into small particles, cannot be admitted; as each particle of a mass of matter must have the same specific qualities with the whole mass.

He next considers another idea held on this subject, that there is a menstruum found in the stomach, which unites with the substances employed for food, and forms the different essential parts of the chyle. But he observes, that none of the fluids of the stomach, or duodenum,

num, appear, from any experiment that has been made, to unite with, or precipitate from farinaceous matters, any thing like the parts of chyle; but, on the contrary, they either form a paste with it, or have a tendency to coagulate it. Farther, as the properties of farinaceous matter, and the matter of a muscular fibre, are totally different, he observes, that the menstruum in the stomach cannot be supposed to form with each a compound, having the same properties; but chyle is always the same in whatever animal it be found, and on whatever food they may have lived.

He also endeavours to refute an opinion, that vegetable substances, in order to be digested, must go through the vinous and acetous fermentations; and that animal substances must go through the first stage of putrefaction; by observing, that the formation of acid in the stomach during digestion, is always produced by the digestion not going on perfectly, the powers of the stomach not being sufficient to overcome the disposition of vegetable substances to run into the saccharine, vinous, or acetous fermentations; and that when the organs of digestion are weak or disordered, or when we

give an animal food not adapted to its organs of digestion, a greater or less portion of the food is not governed by the stomach, but runs into the fermentations which would arise if it were not influenced by its power. Besides, meat already fetid and tender from putrefaction, after having been subjected to the action of the stomach, is found to be firmer, and free from foetor.

He then proceeds to draw some conclusions of his own, from observing what happens in sound and healthy stomachs; and he begins by considering how farinaceous matter, which is one species of matter only, can be converted into a chyle, which consists of three distinct species, mixed together.

He first supposes, that if we have three species of matter, and take the smallest possible part of each, viz. A, B, C.:—A, may unite with B, and form a compound M; which may unite with C, and form a compound particle X: or A combined with C, may form N; which, combined with B, may form a compound particle Y: or B and C may form a compound O; which, combined with A, may form a compound particle Z. Thus then he obtains

obtains three different compounds, X, Y, Z; and as they each contain the same matter exactly, they must differ, not in their elements, but in the manner in which these are combined. Thus, he thinks, one species of matter may be entirely converted into another species of matter, without any loss or addition whatever.

In the same manner, he shews, that if A and B unite to form M, and C and D to form N, and if M and N united form X, this compound X may be decomposed, so that A united with D may form O, while B and C form P, and these compounds O and P may not be capable of combining with each other; and thus, from X, two other compounds, O and P, may be formed, containing exactly the same matter, and incapable of uniting with each other.

And as, upon distillation, chyle, and a piece of a muscle, afford the same empyreumatic oil, volatile alkali and charcoal; it appears that they do not differ in any other respect, excepting that the elements of which they both equally consist, are united by one mode of combination in the muscle, and by another mode in the chyle. Thus he supposes the conversion of the muscle into chyle, to be a separa-

tion of its elements from each other, and a re-combination of them in a different manner; so that the compound shall have new properties: And since, by putrefaction, vegetable matter may be made to yield exactly the same elements as chyle, it follows, that, in digestion, the elements of the vegetable are only separated from each other, and recombined in such a manner as to produce and become chyle.

He now proceeds to inquire, by what power a compound may be decomposed, and its elements reunited in a new manner. Between different species of matter, he observes, there exist what are called attractions, and that these vary according to the circumstances in which the matter is placed: So that, although there be always present, substances capable of being converted into chyle, yet that change will never take place, unless they be influenced by the action or circumstances which they meet with in the organs of digestion of a living animal; so that no chyle ever has been produced in any other situation. The effects of the action of the living stomach, he proves by observing, that if more food be taken than it can digest, the overplus falls into the same
fermentation

fermentation as if placed in similar circumstances in a dead stomach.

With regard to the wholesomeness of food, he observes, that no food is in itself wholesome or unwholesome, but as it is compared with the present state of the stomach.

The use of the coagulating juice found in the stomach, he supposes to be, to detain the food there, until, by its action, it be converted into a new substance, whose properties are at present unknown ; which new substance is the only one which can be converted into chyle in the duodenum and jejunum. This action is therefore the most material part of digestion ; for, no food that is not there converted into this new substance, can ever become chyle, but must pass forwards to be evacuated. Hence he observes, chyle is not always in proportion to the quantity of food.

VII.

Des propriétés de la plante, appelée, Rhus radicans. De son utilité, & des succés qu'on en a obtenu pour la guérison des Dartres, des Affections dartreuses, & de la Paralysie des parties inférieures. Des propriétés du Narcisse des pres, & des succés qu'on en a obtenu pour la guérison des Convulsions. Par M. du Fresnoi, M. D. &c. &c. 8vo, A Leipzig, 1788. Vide Commentarii de Rebus in Scientia Naturali et Medicina gestis. 8vo, Lipsiæ, Vol. XXXIII.

IN this treatise, the author shews how poisonous and deleterious plants may become efficacious, or even specific remedies against diseases, hitherto the disgrace of the healing art. He first treats of the use of the poisonous tree which is the subject of this dissertation, in Herpetic affections, and in Paralysis. Accident suggested to him its use; and, that others might not suffer by his experiments, he began by taking himself the infusion of one of
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the three folioli of which each leaf of this plant consists ; and as this dose produced no sensible effect, he increased the number to twelve. Then, indeed, his perspiration and urine were increased in quantity ; and he had some pains in his belly. Seven cases which he relates, serve, he thinks, to put the efficacy of the infusion, and distilled water of the leaves, in herpetic affections, beyond all doubt. From these we shall select the following.

“ A country woman came to me (says our author) in the month of July 1780, to consult me about the herpes farinosa, with which her face had been covered for more than a year. She was ordered to take an infusion of this plant, and in six weeks was entirely free from the disease.

“ The patient suffered no inconvenience from her cure ; and told me, that being naturally of a melancholic temperament, whenever she drank the infusion, she became cheerful, and was less anxious about herself. Other patients who afterwards took this medicine, said the same.”

Five cases of paralysis are related, which were cured by the use of this vegetable. The accurate

curate descriptions of these cases are worthy of a perusal in the work itself.

The leaves of this plant are to be cut when in the greatest vigour, that is; about the month of June; and this must be done with all that caution a plant so poisonous requires.

“ The men (says our author) wear leathern gloves, which reach up to their elbows, and are tied, to prevent their coming down. Hence the plant never hurts them; at least he never observed this, excepting in one case, where inflammation of the eye-lids was induced by the vapour from the plant. On the contrary, however, others suffered no inconvenience, although they gathered the leaves even without gloves.”

“ I distilled (says M. Fresnoi) four pounds of the leaves with thirty-two pounds of water. This distilled water had a slight odour, although the plant is entirely free from it. When tasted, it was pungent, and inflamed the mouth. The decoction which remained in the still was of a brown colour, and covered with a clammy light pellicle. When strained and evaporated, it gave a shining extract of a fine black colour. The leaves inflamed and swelled the

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the hands and arms of those that took them out of the still, and brought on an itching, which remained for several days."

"Forty-two pounds of leaves gave twenty ounces of extract, of a proper consistence for the formation of pills."

In sacred processions, the people of Flanders, particularly at Valenciennes, strew the way with the flowers of the season. The *Narcissus praetorum* is therefore used in April, which the country people bring to be sold in town.

"In the year 1786, (says our author) two out of three processions which should have happened in April, did not take place on account of the badness of the weather. On this account, a girl, already subject to hysterics and slight convulsions, laid the flowers intended for strewing the streets at the procession, in her bed-room. Next day she told me, that she had undergone a great change; that she had had no fits, and slept much better. It occurred to me, that the cause of this change was to be sought for in the flowers with which her room was filled. That I might not be deceived, I caused fresh *Narcissi* to be put into her chamber, and the night was spent quietly, and free

free from convulsions, which had not been the case for some time before. Next day, I made the flowers be removed; and the windows flung open; and that night, and the two days following, the convulsions reappeared. The flowers being again brought into the room, the day was spent without any fits. I was now persuaded that the alleviation of the disease was to be ascribed to the smell of the flowers; and I thought that the effects of the extract should be tried in allaying convulsive motions. The success of this medicine exceeded my hopes. By its use, forty-two children were cured of the tussis convulsiva, which was epidemic at Valenciennes during the end of the year 1786. Four grains of the extract were dissolved in four ounces of syrup, and a table-spoonful given to the children every third hour; by which means the cough gradually abated, and at last entirely left them."

VIII.

Observations sur les Propriétés Febrifuges de l'Ecorce de Marronnier d'Inde, et sur les Avantages retirer de son emploi que peut la médecine dans le traitement des Fievres intermittentes. Par M. Cuffon, M. D. 4to, A Montpellier. Vide Commentarii de Rebus in Scientia Naturali et Medicina gestis. 8vo, Lipsiæ, Vol. XXXIII.

THE spirit of philosophic investigation peculiar to this age, has been the origin of many useful discoveries in botany. But it is astonishing, as the author of this dissertation justly observes, that while our ships return loaded with the products of another hemisphere, we should neglect the plants with which nature has abundantly supplied Europe. We despise them only, without doubt, because they are so common. Of late, however, physicians have paid attention even to the plants indigenous in their own country; and the account of
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of their labours evinces their success, and shews it to have been the source of very useful discoveries.

Although the observations of the ingenious M. Cusson upon the febrifuge powers of the *Æsculus hippocastanum*, cannot be said to increase our knowledge in that particular, yet they tend to support the expectations of the success which may be derived from the use of this bark in the cure of intermittent fevers. By its use, our author thinks the Peruvian bark may be almost entirely superseded; at least, in his opinion, it has deservedly the preference with regard to the poor.

The *Æsculus hippocastanum* Linn. or horse-chestnut, is a plant indigenous in the north of Asia, and was brought to Europe in 1550. It has however so acquired the habit of our plants, as to be generally reckoned a native of Europe. The verdure of its foliage, the shade it affords, the sweetness and beauty of its flowers, were long the reasons why it was enumerated in the list of trees deserving culture on account of their elegance. Now, however, the medical and oeconomic use of its fruit and bark are sufficiently evident.

From

From the bark, an essential salt may be procured, alike in colour, shape, and properties, to that obtained from the Peruvian bark. Indeed, there is a striking analogy between their constituent parts in every particular. On these accounts, it is not wonderful that the bark of the Horse-chestnut should be useful in combating intermittent fevers, in restoring tone to debilitated patients, and in stopping the progress of mortification.

Our author, after having given an account of the best experiments and observations of others upon this subject, thus proceeds to his own.

“ A proper opportunity having offered, for the first time, in the month of August 1779, I prescribed the bark of the *Æsculus hippocastanum*. The patient was thirty years old, of a bilious temperament, and had already laboured under a tertian fever for six weeks. The success of the trial answered my expectations; for, twelve drachms of this bark, taken in the intervals between three paroxysms, effected a cure. Encouraged by the first success of this bark, I have used it in all the cases in which I thought it proper. I have been so lucky as
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to be generally successful; and during the many years in which I have made use of it, I have cured many cases of intermittents, as completely as I could have done by the use of the Peruvian bark. The numerous cures performed by it at the public hospital, of which I am physician, force me to confess, that I have found in it those powers which were thought peculiar to the Peruvian bark; and I am inclined to think, that it might be substituted in its place."

"In some cases, I have seen it act as a purgative, and in others as a tonic. This serves but to strengthen the analogy. Therefore I think that the name of *Cinchona Europea* would not be undeservedly given to the *Æsculus hippocastanum*, since its bark deserves, equally well with the Peruvian, to be enumerated among the febrifuges in our dispensaries. The bark of the Horse-chestnut requires cautions in its use, on the observance of which its efficacy in a great measure depends."

"There must be particular care taken to procure good bark. That seems best which is obtained from trees of a moderate size in the spring, when the tree abounds with juice. That

too is to be preferred which is not destroyed by vermin, but sound, solid, and dry. Experience likewise shews, that a proper preparation of the patient renders its use more efficacious. With this design; blood-letting, relaxants, and evacuants, are to be employed, according to the nature of the disease, and the strength and constitution of the patient. Nor is this bark, he tells us, to be used, until the patient has had several paroxysms, and until it be certain that the febrile matter is already partly formed by nature. At the end of this useful treatise, twelve cases of fevers, cured by the use of this bark, are related; the first of which we shall translate.

“ Auriac, a stone-cutter, aged 30 years, of a pituitous temperament, had been already subject to paroxysms of a tertian for six weeks, when he consulted me in the month of March 1779. As he had used evacuants from the beginning, the bark was prescribed to be taken on the third day after he had been purged, by my direction. And on the first day free from a paroxysm, he was ordered to take a dram

of the powder, every four hours, to the extent of half an ounce.

“ Next day, the paroxysm was much milder, and he was almost entirely free from the cold fit. The remedy was repeated, the second day free from a paroxysm. The violence of the paroxysm was now still more broken, as the patient scarcely perceived it: he was entirely free from the cold fit, and had only very slight pains in his head, a small degree of heat, and an almost insensible perspiration. The third exhibition of the remedy, entirely freed him from every appearance of a paroxysm; nor had he any return of his complaint after he had drunk the decoction of this bark for one week.”

IX.

Observations chirurgico-legales sur un point important de la Jurisprudence Criminelle, lues à la scéance publique de l'Academie des Sciences de Dijon. Par le Professeur Chauffier. 8vo, A Dijon, 1790.—Vide Commentarii de Rebus in Scientia Naturali et Medicina gestis. 8vo, Lipsiæ, Vol. XXXIII.

THE most severe study of the laws, the greatest prudence and strictest integrity in a judge, are not always sufficient to enable him to give a just sentence. For cases occur, which require a knowledge of other studies, particularly such as relate to diseases, wounds, or the investigation of the causes of death. Here the most attentive is easily deceived, unless he be experienced in the knowledge of the laws of animal organization, which can be obtained only by practice, and which want cannot be supplied by reason or judgment.

On this account, Professor Chauffier has published this work, which contains many observations, extremely useful in directing the opinion of a medical practitioner, whose assistance is required by a judge. For, by attention to these, errors may be with certainty avoided, into which even the most experienced observers might fall. Why? Is death always the immediate consequence of a recent quarrel? May not the slightest contusion, or most simple wound to appearance at first, afterwards degenerate? If this happen, such are often followed by death, or by tedious and severe diseases. Nor does it happen unfrequently, that the person who is wounded, spurred on by hatred, revenge, and his own interest, exaggerates the injury, and counterfeits pains and diseases which he does not suffer. Nay, do not instances occur, of persons guided by the basest passions, that would expose themselves rashly to danger, endeavour to provoke an injury, gladly seize upon the slightest difference, to raise the most dreadful tumults, and even wound themselves? Has not the malicious spirit of man gone so far, as to load with insults, mutilate, deface, and mangle even the dead? Questions with respect to these,
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are best explained by medical men. He also takes notice of the credit to be given to witnesses ; and points out many obvious faults in the answers of the sworn surgeons, (*chirurgi jurati*). From this work we shall extract the following observations.

Whoever considers the very important necessity of the response of a surgeon, in criminal cases, for easing the mind of the judge, for defending the life and character of the accused, and for preserving that order on which public safety depends ; whoever reflects upon how much care, attention, and industry, such a response requires, will be easily convinced, that the province of giving it, ought to be assigned to the most deserving, upright, and skilful ; and that rules and cautions should be prescribed by the laws, by which the truth of these responses may be examined, and their defects avoided, or, at least, immediately discovered, that they may be removed. But it must be acknowledged, that it is far otherwise. Every where, the right of giving these responses is disposed of, or bought by money ; and thus

it is often exercised by young and inexperienced practitioners.

At this time, when the French are modelling a new constitution, the illustrious Chaufsier proposes the following three remedies, for the many inconveniencies often found in the answers of the sworn surgeons, as they have been called.

1st, The surgeons called in, should be obliged to follow one constant and immutable form or method, in making out their responses. For instance, of describing, according to the common and usually received form, first, what happened before the visitation; secondly, the state of the wounded person; and, lastly, what consequences seem likely to follow.

2dly, The visitation and examination of the wounded person should be always before two witnesses, according to the decree of the National Assembly, for the reformation of the criminal jurisprudence.

3dly, The responses should be always written in the place of visitation. This rule has already been prescribed by several decrees, which, though express enough, are seldom observed: For cunning men can always find specious reasons for their subterfuges.

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That this most useful, but much neglected part of the healing art may be restored to perfection, our author advises, that in all medical universities, an annual public course of lectures on medical or surgical jurisprudence, should be given; and that no practitioner be allowed to give his evidence, until it be known that he has diligently attended these lectures, and has subjected himself to a public examination upon this most material subject. From these regulations he observes, it will soon happen, that the surgeons in France will be learned in the manner of giving responses, and, in this particular, rival, in fame, the Germans.

At the end of this treatise, we find the following important articles proposed.

1st, That the office of chirurgus, or medicus juratus, be abolished.

2^d, That the judge have a power of naming and choosing those who are most deserving of being trusted, and who can best execute what is required.

3^d, Nor is it less necessary that a general formula of answers be fixed, lest various objects be confounded.

4th, That the wounded person be visited always in the presence of two appointed witnesses.

5th, That when a body is to be examined or dissected, besides two ordinary witnesses, a third be added, who is always to be taken from among the practical physicians.

6th, That the response be always written in the place of visitation, in the presence of the witnesses, who should sign it.

7th, That the responses be deposited within twenty-four hours in the records (*greffe*) of the place, and shewn to the judge; and that an accurate copy be immediately sent to the chamber of verification (*bureau de verification*).

8th, That in the metropolis of each province, a chamber of verification for the responses of surgeons, be instituted.

9th, That the reasons for the opinion of those whose duty it is to give the verification, be written on the copy of the response; which is to be immediately sent back to the judge.

10th, That if the response be disapproved of by the chamber of verification, the judge shall

shall cause a second visitation to be made by others ; but if approved of, that it shall be admitted at the trial, as if endowed with the power of proving.

11th, That both in the faculty of law, and in the medical universities, a public course of medical jurisprudence, be appointed to be delivered.

12th, That no one be admitted as a medical practitioner, either for the town or country, unless he has attended these lectures, and been publicly examined on the subject.

X.

Examen chimique des Larmes et de l'Humeur des Narines, auquel on a joint de nouvelles considérations sur quelques-unes des Maladies auxquelles ces Liqueurs donnent naissance. Par M. M. Fourcroy & Vauquelin. Vide Journal de Physique. Tome XXXIX. Part. II. 1791, Octobre.

THIS essay is introduced, with the following account of what has hitherto been written upon the tears.

The tears have been considered as an aqueous, limpid, saline liquid, which leaves almost no residuum upon evaporation. There has been hitherto no proper chemical analysis of this fluid; indeed, it is extremely difficult to procure a sufficient quantity for examination. Some observers have seen crystals formed in the tears; and they have given rise to a kind of calculi, like the other fluids of the human body. Blasius has seen them in the caruncula lachrymalis.

malis. Schoeper has found crystals adhering to the eye-lids after ophthalmia. Such is the sum of the observations which Haller has given us, upon the nature of tears.

Nothing marks, more obviously, the absolute want of the labours and researches of philosophers, than this chasm in a work, the fruit of the deepest erudition, which presents to medical men the most complete collection of observations, and throws the greatest light on the animal œconomy. This want of facts upon the nature of tears, was not the only motive which prompted us to attempt a work upon this liquor. We thought, that being collected, and remaining in organs always in contact with air, they might undergo alterations, which might be accurately ascertained, and which might throw some light upon the functions of these organs. The unknown nature of the nasal mucus, its continual mixture with the tears, and the use attributed to these last, of diluting the mucus of the nostrils, appeared to us to be worthy of a careful examination. This examination might lead to the knowledge of some of the diseases of the eye-lids, lacrymal ducts, and nasal sinuses.

nuses. The sequel will shew, that these motives were well founded.

In the *second* section, an account is given of the means employed to procure the lacrymal and nasal fluids. It is well known, that it is almost impossible to obtain the fluid secreted from the lacrymal gland, alone, and separated from the nasal mucus, with which it generally mixes itself: for this purpose, we required some of those rare cases where the secretion of the lacrymal gland is increased. Such an effect is the consequence of the passions of joy and grief; but when under their influence, people do not easily subject themselves to experiment. However, we have sometimes used this expedient in procuring the lacrymal fluid.

Observation has remarked a lively sympathy between the organs of smell and sight, which depends upon their nervous, vascular, and membranous communications. If the membrane of the nose be stimulated, either by acrid substances or mechanical irritation, a greater quantity of tears will flow than can be absorbed by the puncta lacrymalia, or carried
off

off by the nasal ducts, on account of the abundance and rapidity of their excretion.

Nature has offered us other means, more advantageous than those already mentioned. Some individuals have their eyes so tender, that cold makes them water abundantly. Many people have been so obliging as to render us a service, by carrying with them, when they exposed themselves to severe cold, a small glass vessel, in which they collected the tears as they fell.

In cases where the lacrymal ducts are affected, the tears cannot take their course through the nostrils, but are obliged to pass over the under eye-lid, and run down the cheek. This has furnished us with the means of procuring the greatest quantity of this fluid. Lastly, we have also had opportunities of making experiments upon the tears of some, in whom the nasal sac was affected only at its extremity; and in whom this fluid collected, could be easily drawn up, from time to time.

We have analyzed the mucus of the human nose in many circumstances.

1st, In a state of health.

2d,

2d, At the commencement and end of that affection, called cold in the head.

3d, In great degrees of cold, when, by the sudden impresson of the air, a clear liquor, more or less viscous, slid down the nose.

Having been often exposed to the action of oxygenated muriatic acid, and having found that it occasioned a running of the nose, we have sometimes made use of that expedient to procure the nasal mucus.

With regard to the Physical properties of the Tears, we have made the following observations:

I. The tears are clear and transparent like water; they have never seemed to have any very sensible smell; their taste is always evidently saline; their specific gravity has always appeared to us a little greater than that of distilled water, though the difference be hardly perceptible in small quantities. They do not change the colour of an infusion of turnsole, nor of paper coloured by it; but they give a green colour to paper stained with the juice of violets or mallows. This green colour is permanent, which shews that it is owing to a fixed alkali.

II.

II. Tears shewed no remarkable phænomena from the action of caloric ; they boiled like other aqueous fluids, although the number of permanent bubbles on their surface, shewed that they were of a mucilaginous nature. By continuing the action of the caloric, the water was almost entirely separated, and there remained a dry matter of a yellowish colour, which was hardly 00.4 of the quantity of tears employed. The decomposition of this fluid in close vessels, gave a little oil and water, while there remained a charcoal containing much saline matter.

III. Dry air robbed the tears gradually of their moisture, and at length evaporated it completely. But as the spontaneous evaporation of the water was very slow, towards the end, cubical crystals were formed, surrounded by an animal mucilage. These crystals, obtained separate by means of alcohol, which dissolved them without acting on the animal mucilage, presented the same properties with the muriat of soda, or sea-salt. Their solution, however, turned paper, stained with vegetable colours sensible to alkalies, to a green : but we shall find, that this was owing to an
alkaline

alkaline matter contained, as well as sea-salt, in the tears. In proportion as these phænomena take place in this fluid exposed to air, it puts on a yellow colour while thickening : sometimes it is greenish or bluish, according as the air, being more or less warm, requires a longer or shorter time to deprive it of its moisture.

IV. Cold and hot water unite in all proportions with tears recently shed ; but after that fluid has been exposed to air, so long as to acquire consistency and a yellow colour, it refuses absolutely to mix with water, and will remain suspended in it, without appearing to change its nature ; although the water in which thickened tears have remained, be capable of being made frothy by agitation, which shews, that it has dissolved a portion of them. It is proper to remark here, that an animal matter, which was naturally soluble in water, has become gradually insoluble, by having that fluid evaporated by the contact with air. This phænomenon, is analogous to what we have discovered and described in another place, of vegetable substances dissolved in water, which become
insoluble

insoluble by exposure to air, and the absorption of oxygen.

V. Alkalies unite very easily with tears, and give them more fluidity; they also dissolve that fluid dried by air, and on which, water has almost no action. They seemed to have no other effect worth describing.

VI. Of all the acids, the oxygenated muriatic acid alone, in its action upon tears, discovered any thing remarkable, or that deserved to fix our attention. This acid, poured upon tears, coagulated them into white flakes, which became yellow, if a sufficient quantity of the acid had been used. The flakes produced in this experiment, are not soluble in water, and are exactly similar to tears thickened by the action of air. The acid loses its particular odour, and all its remarkable properties. It is, therefore, by depriving the oxygenated muriatic acid of its oxygen, that the tears are coagulated, and become of a yellow colour. By comparing with these phænomena, what we have observed to happen to this fluid, while drying in atmospheric air, it seems evident, that the new properties which it acquires during desiccation, are

owing to the same cause, the absorption of oxygen.

The analogous results of these two experiments, induce us to think, that a similar phænomenon takes place in this fluid, when confined for some time in the lower part of the lacrymal sac, in those who have this organ obstructed. When the sac has been distended some hours by the congestion of the tears, a gentle compression, excited by the pain owing to the distension, causes the puncta lacrymalia to pour out a matter very thick, yellow, and perfectly insoluble in water ; whereas, this matter, frequently pressed out from the lacrymal ducts, is as liquid as water, and easily combined with it. Indeed, the action of the oxygen, which tends to thicken the tears, is aided by a considerable evaporation ; for, accurate experiments, made with the intention, prove, that four times more matter can be obtained from the lacrymal sac, by emptying it every hour, than only at the end of four hours : there must be, then, a pretty rapid evaporation or filtration of the more liquid part of that fluid, down the nostrils.

It is also owing to the same chemical agent,
oxygen,

oxygen, that the formation of that substance, solid, yellow, and insoluble in water, called gore of the eyes (*chassie*), is to be ascribed.

The sulphuric and muriatic acids, produced no change upon tears recently shed; but they caused a sensible effervescence with them, dried in air. The effervescence produced by the sulphuric acid, is owing to a mixture of muriatic acid gas, and carbonic acid gas. That produced by the muriatic acid, is owing to the carbonic acid gas alone. This last, is also much less considerable, as there is but one substance decomposed, while the sulphuric acid decomposes two. After the action of the muriatic acid, the only salt contained in the mucilage, is muriat of soda. These two experiments prove, that the tears contain muriat of soda, and soda; this last is certainly in its caustic state, since lime-water produced no precipitation in that fluid, when recent, although it made a solution of the product of tears, by spontaneous evaporation, muddy. M. Vauquelin has already shown, that he found caustic, or pure soda, in the human seminal liquor; and that, like the tears, that liquor exposed to air, gradually absorbed the carbonic acid.

The effects produced upon the tears by the action of alcohol, are next considered.

Alcohol, poured in sufficient quantity upon the tears, decomposes them, and precipitates from them the mucus, in the form of large white flakes. If the alcohol be evaporated, after having separated the mucous precipitate, it leaves marks of muriat of soda, and of soda. This menstruum might then serve to discover the proportion between the mucous and saline part of the tears.

The burning of the product of tears thickened by the air, has only pointed out to us the presence of calcareous phosphat : the phosphat of soda is hardly perceptible. As to phosphat of ammonia, it could not exist in it, as it contains pure soda, by which it would be inevitably decomposed.

The result of these experiments, proves, that tears are a combination of a particular mucilage, which, after the water, constitutes the largest proportion of their bulk ; of muriat of soda, which possesses the third place ; of soda, which is next ; and of the phosphats of lime and of soda, which are very small, and hardly perceptible.

In

In the fourth section, is given an account of the Mucus of the Nose.

The fluid here treated of, is that liquid which is afforded very copiously by the membrana pituitaria, in the disease, commonly called, cold in the head, because it can only be procured in sufficient quantity in such a case.

At the commencement of the disease, it is clear and transparent like water ; its odour is scarcely sensible, and its taste is saline, and slightly acrid. Hence it tickles and irritates, and gives rise to sneezing, as it exudes from the glands of the membrana pituitaria.

As, in this state, it presents us with almost the same properties with the tears, we will only take notice of a few slight distinctions we have observed.

Like the lacrymal fluid, it contains muriat of soda, soda, and some particles of phosphat of lime, and of soda. At the end of colds of the head, and after the irritation of the membrana pituitaria has ceased, this fluid flows more slowly, and remains longer attached to the side of the nasal cavities. There it undergoes several alterations, of which, the results

have long been known, but whose cause has hitherto escaped the notice of physicians.

1st, The heat produced by the topical inflammation of the parts, thickens the fluid more quickly.

2d, The air, which passes in great quantity through the nostrils, deposits there a quantity of oxygen; and hence, the thick puriform consistence, and yellow or greenish colour of this fluid.

3d, A portion of the carbonic acid, expired by the lungs, unites with the soda of the mucus of the nose, and gives it the property of precipitating lime-water, and barytic salts.

It is thus, we imagine, that the matter which adheres to the windpipe and bronchiæ of those labouring under cold of the breast, is thickened, and becomes yellow. The mucus of the nose, when thickened, in general gets a deeper yellow colour than the tears in the lacrymal sac, which is the natural consequence of the cause of these changes; the mucus of the nose being in continual contact with the air, while the tears are exposed to it only as they pass along the surface of the eye, to enter the puncta lacrymalia. Hence also,
the

the mucus of the nose gets more viscosity and tenacity than the tears, in consequence of the change.

In order to avoid the objections which might be made to our experiments, on account of the mixture which happens of the tears, and mucus in the cavities of the nose, we collected this last in a person whose lacrymal ducts were obstructed at their lower part; and we found it perfectly similar in its properties to the lacrymal fluid.

The disease produced in the nose by the oxygenated muriatic acid, and its analogy with some natural diseases of the nasal cavities, is next considered.

The nasal mucus, which we obtained by respiring the vapour of oxygenated muriatic acid, was exactly of the same nature with that excreted in colds of the head, except that the first portions did not contain pure soda, and did not turn vegetable blues green. This analogy is not wonderful, as there is no difference between the natural affections of the membranes of the nose, and the symptoms which the action of that acid gives rise to in these parts. The first ef-

fect of the vapour of the oxygenated muriatic acid, is to cause a sense of stricture, and insupportable pain in the frontal sinuses, and still more in the posterior nasal sinuses: sneezing soon follows, and presently there is an abundant effusion of a liquid as clear as crystal. The sneezings are sometimes so quickly repeated, that an abundant sweat covers the body of the person who experiences this effect from the acid. M. Vauquelin has sometimes had his breast so tired, that he dreaded hæmoptysis; but, although very often exposed to the action of this acid, he has never spit up blood. The effusion of the nasal mucus has been sometimes so copious in his case, that he has collected two ounces in half an hour. After the most violent symptoms of this kind of artificial flux, from the membranes of the nose and bottom of the throat, has ceased, there still remains for several hours, a tightness, or a kind of insupportable stiffness, in all the parts which were subjected to the action of the oxygenated muriatic acid. When the running has stopped entirely, the canals and sinuses of the nose are stuffed; they do not allow the passage of air for respiration;

spiration; and a sensation, as if much affected with cold in the head, is felt.

The mucus is so thickened, that it is impossible to extract it by the action of blowing the nose, until it be (if we may say so) ripe: then it detaches itself in considerable masses, very thick, of a greenish yellow colour. If the vapour of the acid passed into the windpipe, or if its effects spread by degrees to that organ, the consequence was, a cold of the breast, with regular and constant periods. An acrid heat was felt in the breast; a hard cough lasted several days; the voice became hoarse; the appetite diminished; and the food seemed to want flavour: nay, there was often a pretty smart fever, and a dull headach, which stupified the senses, and put the person who tried the experiment, in a very disagreeable situation for several days.

After these facts, there can be no doubt of the oxygen of the muriatic acid having produced here an artificial cold, since the vapour of other acids, which did not contain the oxygen in a state so detached, did not produce the same effects. The condensed oxygen seemed to irritate the glands
of

of the membrane of the nose, by causing them to contract; while, at the same time, a greater quantity of fluid than ordinary is expressed from them. Is there not, then, an analogy between the cause of these artificial colds of the head and breast, and that which generally gives rise to natural colds? May it not, in many cases, be ascribed to the oxygen in the atmosphere being too much condensed by severe and penetrating cold? When exposed to very dry cold air, does not a constriction take place in the membranes which line the nose and windpipe? May we not ascribe to the same cause, the irritation of the fibres for the secretion of mucus, the extraordinary flow of mucus, and the thickening which takes place when that fluid begins to be less abundant?

An analogy, striking to those who are subject to that disease, and who are violently affected by the oxygenated muriatic acid, between the sensations produced by cold and by this acid, and an almost perfect identity of the symptoms in the two diseases, add, without doubt, great weight to this opinion: but we must grant, that, in natural colds, the causes are often complicated.

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The same ingenious authors have promised to prosecute their researches into the nature of these fluids, and to enter more into the detail of this subject, in a Memoir upon the causes and progress of colds, or rheums in the head, and of several diseases of the breast.

XI.

*Pharmacopœia Collegii Regii Medicorum Edin-
burgensis.* 8vo, 1792.

THE College of Physicians of Edinburgh, have followed, with respect to their Pharmacopœia, a plan different from that of the London College. The latter allowed near half a century to elapse between the publication of the last edition of their Pharmacopœia, which appeared in the year 1788, and that which immediately preceded it, which was published as early as the year 1746. The Edinburgh College, on the other hand, have made it a rule, to publish a new edition of their Pharmacopœia, every ten or twelve years. This plan, we are inclined to think, is in many respects preferable to the other. For, by this means, the successive improvements gradually made in the practical part of medicine, and those sciences most nearly connected with it, are

are sooner introduced into established practice, and recommended by respectable authority. But, besides this, when the publication of different editions takes place at short intervals, fewer changes become necessary, and consequently they are more readily and more easily adopted. For alterations may with ease be effected in a gradual manner, which cannot be accomplished at once, without very great trouble. Even the interval between publications which has been allowed to elapse by the Edinburgh College, seems to be too long. And perhaps it would be an improvement of medical police, if the British Legislature were to direct the Colleges of Physicians under their jurisdiction, which may be considered as councils of health for the kingdom, to publish a new edition of their Pharmacopœia, every five years. For, by this means, useful alterations would necessarily be sooner introduced into common practice.

To this eighth edition of the Edinburgh Pharmacopœia, an address to the reader is prefixed, which first appeared at the beginning of their Pharmacopœia, published in 1722, and which was reprinted in several succeeding editions.

editions. The intention, of again reprinting it, is probably to shew apothecaries the authority possessed by the College of Physicians of Edinburgh, founded on an act of the Parliament of Scotland, for regulating the practice of Pharmacy in that part of Britain.

In an additional preface, peculiar to the present edition, the reader is informed, that, in the work now presented to the public, the College have chiefly followed the seventh edition of their Pharmacopœia, never deviating from it, without strong reasons. From an attentive comparison, however, of the two, it will soon appear to the discerning reader, that not a few changes have been thought necessary.

In the list of the Materia Medica, the College, in place of referring, as formerly, to an old edition of the Species plantarum of Linnæus, have, in general, referred to the edition of the Systema vegetabilium of that illustrious author, published by the late celebrated Professor Murray of Gottingen, which contains not only all the improvements made by Linnæus himself during his lifetime, but likewise most of the discoveries of succeeding botanists. But where particular articles have been more minutely

minutely described by eminent botanists, in publications of still later date, such as, the *Geoffræa inermis* by Dr Wright, the *Styrax Benzoe* by Dr Dryander, &c. these descriptions are quoted from the *Acta Londinensia*, *Holmimensia*, and other works of credit.

To the present list of the *Materia Medica*, several articles, which did not enter the last, such as the *Angustura*, *Arsenicum*, *Barytes*, *Cajaputa*, *Lactuca virosa*, *Nicotiana* and *Spongia*, are added. A very few, as the *Cinnabaris factitia*, and *Fæniculum vulgare*, have been thrown out. The *Cinnamomum*, as the reader may readily conclude, from observing that it enters into various compositions in the after parts of the work, has been accidentally omitted. Several names, formerly affixed to articles in this list, which were derived from erroneous ideas respecting the nature of these substances, and which, of course, tended to mislead, have been altered. Thus, the name *Catechu*, is substituted for *Terra japonica*, the article being in reality a vegetable extract; *Lapilli cancrorum*, is employed for *Oculi cancrorum*; and *Sevum ceti*, for *Sperma ceti*.

On

On the same principles, the removal, viz. of absurd names, and the introduction of such as will convey a just idea of the nature of the substance employed, more numerous changes have taken place among the names used in the second part of this work, that, viz. which respects the *Medicamenta præparata et composita*. It has, in general, been the aim of the College, to name every article, not from its supposed virtues, but from those parts on which its activity principally depends. Thus, in place of the terms, *Elixir Proprietatis*, *Stomachicum*, *Traumaticum*, *Paregoricum*, *Sacrum*, *Salutis*, &c. they have employed *Tinctura Aloes cum Myrrha*, *Gentianæ composita*, *Benzoini composita*, *Opii ammoniata*, *Rhei composita*, *Sennæ composita*, &c. Among the chemical preparations, there was still greater latitude for a change being made with advantage. Thus, the distilled waters are no longer confounded with the spirits obtained from the same articles; and, of course, the term *Aqua spirituosa*, is entirely rejected. A similar system of change has been adopted through the saline and metallic preparations; and from the names now introduced, those who have even
but

but a very slight acquaintance with chemistry, can be at no loss in forming a just idea of the nature and composition of every article.

In this important change of nomenclature, it must, indeed, be allowed, that the Edinburgh College have only followed the example of that of London ; and it seems to have been their view, to render the medical language for prescription, in different parts of Britain, not dissimilar. But the Edinburgh College have, by no means, implicitly followed that of London, in their change of names. Thus, for expressing the fossile alkali, the London College have employed the term *Natron*, a word of ambiguous meaning among the ancients, and approaching very nearly to the term *Nitrum*, with which, it has often been confounded. To avoid the inconvenience arising from these sources, the Edinburgh College, for expressing the fossile alkali, have employed the term *Soda* ; a word sanctioned, at least, by the authority of the most eminent modern chemists. For expressing the vegetable alkali, the London College have employed the term *Kali* ; a word not only exceptionable, from its being indeclinable, but from its

being already appropriated by the Botanists, to a particular plant, from the ashes of which, the fossile alkali is very frequently obtained. For these reasons, the Edinburgh College thought another term necessary; and have employed that of *Lixiva*; a word sanctioned by the authority of Pliny, Columella, and some other distinguished ancients. These changes necessarily lead to some difference in the names of the compound salts. Thus, what was formerly known by the name of diuretic salt, or regenerated tartar, is the *Kali acetatum* of the one college, and the *Lixiva acetata*, of the other. The purging salt, which formerly derived its name from Glauber the chemist, is the *Natron vitriolatum* of the one, the *Soda vitriolata* of the other. From this variety, however, hardly any difficulty can arise to any one, qualified for being employed in the shop of an apothecary. And from the new names employed by both Colleges, some knowledge will necessarily be obtained of the nature of the article. We cannot help thinking, however, that, in these particulars, the nomenclature adopted by the Edinburgh College, is, upon the whole, preferable.

To prevent, as far as possible, any mistake or inconvenience from the new names, they have not only subjoined to this edition of their Pharmacopœia, an Index nominum mutatorum, but have also, in the text, reprinted the vulgar as well as the proper names. By this means, a very slight degree of attention only, will be sufficient to enable any one to acquire a full acquaintance with their new nomenclature.

But, besides the change of names, the Edinburgh College, in the present edition of their Pharmacopœia, have, in almost every section of that part of their work, which treats of the *Medicamenta præparata et composita*, made considerable improvements, by the alteration of some compositions, and the addition of others.

Under the head of the *Præparationes simpliciores*, they have introduced an *Opium purificatum*, an article highly necessary for avoiding the uncertainty and inconvenience which often results, from various foreign matters which opium frequently contains, in the state in which it is imported to us. They have added *Conserva Cynosbati*, an article frequently employed as a vehicle for more active sub-

stances ; and Succus spissatus lactucæ virosa, an article represented by some accurate observers, as possessing very active powers. Among the Infusions, they have introduced an infusum catechu, a much more elegant formula for the exhibition of that vegetable astringent, than the diffusion of the electuarium japonicum, as it was formerly called, in water. For, by this means, the medicine is entirely freed from those impurities, often attached in such quantities to the extractum catechu, as to lead to its being mistaken for an earth.

To the Decoctions several are added, as the Decoctum Cinchonæ, Geoffrææ, Mezerei and Sarsaparillæ. These, indeed, are extemporaneous articles, which cannot be kept ready prepared in the shop of the apothecary : and the strength of decoctions of these articles, must often be accommodated to the circumstances of the case. But, at the same time, no inconvenience can arise, and some benefit may be obtained, from there being a fixed formula, to which a practitioner may have recourse when he thinks necessary.

An alteration is made in the preparation of the Syrupus Limonum, with the view of rendering

rendering it a more agreeable, and of the Syrupus papaverum, with the view of rendering it a more steady, medicine. The Vinum antimoniales of the last edition, is expunged, as being much more precarious, in point of strength, than the Vinum antimonii tartarifati, which answers the same purposes; and the Vinum millepedatum, is left out, as being an useless article. But a Vinum nicotianæ, is introduced, which is one of the best formulæ under which that active article can be exhibited, when intended to act as a diuretic. A formula is introduced for an Acetum aromaticum; an article which may be of considerable use, where vinegar is employed for counteracting contagion; and which may be considered as an elegant reformation of what was formerly known under the name of Thieves vinegar, an article celebrated even against the contagion of the plague.

The Tinctura saturnina is omitted, as being, in reality, in the mode in which it was directed to be made, a preparation rather of iron than of lead, as was intended. A Tinctura Colombæ has been added, as being an elegant and advantageous form for exhibiting

that useful article in many different cases. A considerable alteration is made in the strength of the *Tinctura opii*, that the *Liquid Laudanum*, as it is called, prepared in London and in Edinburgh, may not differ so much in point of strength, as was formerly the case. But although the Edinburgh College now direct only one part of opium to twelve of menstruum, in place of one to nine, their former proportion; yet the difference of strength is less considerable than might at first be imagined, as the Tincture is now directed to be prepared with purified opium. And by this alteration, the medicine will unquestionably be more steady than when prepared with opium, containing very different proportions of foreign matter.

Among the saline preparations, the Edinburgh College have introduced a *Soda Phosphorata*. This new purging salt, which, as may be inferred from the name, is a composition of the fixed fossile alkali, with the Phosphoric acid, and therefore is nearly allied to the *Soda vitriolata*, or Glauber's salt, and to the *Soda tartarifata* or Rochelle salt, has now, we believe, for the first time, a place in any
pharmacopœia.

pharmacopœia. For the invention of this composition, and its introduction into the practice of medicine, the public are indebted to that ingenious physician, and able chemist, Dr George Pearson of London. It may certainly be considered as an important addition to the shops of the apothecaries. Although it cannot be represented as equally adapted to every case, and to every constitution; yet it is, we think, upon the whole, preferable to any of the purging salts yet introduced into the practice of medicine. For, when taken in a sufficient quantity of veal broth, beef tea, or any similar fluid, it gives no more taste than would arise from a proper proportion of common culinary salt; and, at the same time, operates freely, without gripes, or any other uneasiness, to the patient.

Under the head of Mercurial preparations, the Edinburgh College have now, for the first time, given a place to a Hydrargyrus acetatus, which, as the name imports, consists of mercury brought to a saline state by means of the acetous acid. It contains, therefore, the same constituent parts with a celebrated arcanum, which has long been vended under the

name of Keyser's pill. And although the mode of preparation here directed, be much more simple than that published several years ago, by authority of the French Government, after the secret had been purchased from Mr Keyser, yet there cannot be a doubt, that this formula furnishes a medicine, in no respect inferior to the pills prepared by Mr Keyser himself.

Another new mercurial, introduced into the present edition of the Edinburgh Pharmacopœia, is the Hydrargyrus muriatus præcipitatus. By this process, that article, long known in the shops by the name of Calomel, the Hydrargyrus muriatus mitis, as it is now styled, is obtained in the liquid way. And it possesses not a few advantages over that formed from sublimation. For here, there is no risk of superabundant acid ; and, by the mode of preparation, it is at once obtained under the form of a subtile powder, without the trouble of levigation, which is required to be performed with very great attention, where Calomel is prepared in the ordinary way. Although, therefore, the preparations of mercury have already, perhaps, been multiplied much farther than is necessary, as will appear from the
tables

tables of mercurials introduced into different chemical works ; yet, to the selection which the Edinburgh pharmacopœia contained, these two may be considered as no unimportant addition.

The method now adopted by the Edinburgh College, for the preparation of the Antimonium muriatum, formerly styled the Butyrum antimonii, or Causticum antimoniale, is a considerable improvement of that which was directed in last edition of their Pharmacopœia. And by the process now recommended, this article can be made at much less expence ; a circumstance the rather desirable, because it is from the Antimonium muriatum, that the Edinburgh College direct the Antimonium tartarifatum, or Tartar emetic, as it is commonly called, the most common, and most useful of all the antimonials to be prepared. And there is reason to believe, that Tartar emetic, prepared from the Antimonium muriatum, is a more uniform and steady medicine, than when it is made, either with the Vitrum antimonii, formerly used by the Edinburgh College, or with the Crocus antimonii, now directed by that of London.

A new antimonial is introduced into the present edition of the Edinburgh Pharmacopœia, under the title of Antimonium Calcareo-phosphoratum. For this, as well as the Soda phosphorata, the publick are indebted to Dr Pearson. By a very ingenious and judicious analysis, published in the Philosophical Transactions, Dr Pearson has demonstrated, that this article, which has also a place in the London Pharmacopœia, under the title of Pulvis antimonialis, is precisely the same with that which has been so long celebrated under the name of Dr James's Fever powder. And, although experience has now demonstrated, that this fever powder by no means possesses those extraordinary virtues which were once attributed to it; yet it may justly be considered as well deserving a place in our Pharmacopœias.

On the powders, electuaries, and pills, few changes have been made; and the same system, as formerly, is adopted with regard to the ointments, liniments, cerates and plasters, by introducing a Linimentum, Unguentum, Ceratum et Emplastrum simplex, which serve as a basis for all other compositions of this kind. But the last formula in the present Pharmacopœia,

pœia, the Emplastrum cantharidum, or common blistering plaster, is considerably improved by the substitution of sheep suet, for hogs lard, which was directed in the former edition. By this change, the plaster becomes more adhesive, and much less apt to melt from the heat of the body; while it still continues sufficiently soft to admit of being spread, without having recourse to a hot iron, by which the flies are in danger of being burnt.

To this edition of the Edinburgh Pharmacopœia, besides the indexes already referred to, is annexed a table, similar to that in the London, and several foreign Pharmacopœias, pointing out the quantity of opium, antimony, and mercury, entering a determined quantity of the different compositions. The reader is also informed, by an advertisement subjoined to the work, that, on the recommendation of the College of Physicians, glass measures for wine, water, and watery fluids, accommodated to the Troy weight, and phials of a particular shape, intended to be appropriated to Laudanum only, are made by the Edinburgh Glass-house company, and sold by the principal druggists and apothecaries in Edinburgh.

From

From the employment of these articles, which have never hitherto been introduced into the shops, many conveniences must arise, as tending to facilitate the business of the apothecary. The London College, indeed, for obtaining that facility in composition which measuring affords, have, throughout their Pharmacopœia, in general directed the quantity of fluids entering compositions to be determined by measure; and accordingly, in every formula, they have subjoined the letters P and M, to denote whether the article is to be taken *pondere* or *mensura*. But it need not be observed, that the employment, in the same receipt, of the terms pounds and ounces, denoting different quantities of matter, must be productive of many inconveniences; and that, in most instances, where the quantity of the substance acted upon is determined by Troy weight, and that of the menstruum by Avoirdupois weight, a very tedious, and often a very difficult calculation will be necessary, for ascertaining the proportion which the one bears to the other. But, by possessing proper measures, accommodated to the Troy weight, all this inconvenience is avoided; and from these measures being

ing made of glass, not only greater cleanliness, but many other advantages also, may be obtained. Such measures have long been employed by the chemists; and may, at least, with equal facility and advantage, be introduced into the shops of the apothecaries.

From appropriating to Laudanum only, phials of a particular shape and structure, many advantages may be obtained. By this means, it will hardly be possible to employ, by mistake, a phial containing Laudanum, for one with any other fluid of nearly the same colour; and thus the future occurrence of those unfortunate and melancholy accidents, which have sometimes arisen from inattention, will be prevented. But, besides this, when it is considered that the dose of Laudanum is generally limited by the number of drops, and that the size of a drop is much varied by the shape of the mouth of the phial, it is evident, that it is only from having phials of the same shape in different shops, that any uniformity in dose can be obtained. For these reasons, the Edinburgh College have recommended, that the phials appropriated to Laudanum, in the shops of all the apothecaries, should not only be of a
peculiar

peculiar figure, but should also be as nearly as possible of the same shape, and the same thickness of lip.

In all these different particulars which have been pointed out, the present edition of the Edinburgh Pharmacopœia must appear to be an attempt towards progressive reformation; and we hope, that it may at least tend somewhat towards the gradual improvement of the healing art.

XII.

XII.

Nouveau Plan de Constitution, pour la Médecine en France. Vide Histoire de la Société Royale de Médecine, Années 1777-8. 4to, Paris, 1790.

THIS elaborate production, the work of a Committee of the Royal Society of Medicine at Paris, may justly be considered as, on many accounts, claiming the most serious attention from every medical practitioner. We are indeed, of opinion, that the plan here proposed for the instruction of those who are to practise medicine, and for the improvement of the art itself, will never be fully carried into execution in any country. And we also think, that, in not a few particulars, it is liable to very great objections. Yet we believe, that there is no school of medicine at present in existence, which may not be materially improved, by adopting some things here suggested. And
we

we are persuaded, that there is no practitioner of medicine, anxious either to increase his own knowledge, or to advance the progress of the healing art, who may not receive essential information from an attentive perusal of it. As any analysis or abridgment would be but an inadequate method of obtaining these benefits, we shall here present our readers with a complete translation of this important article, omitting only a few sections, which, to us, do not seem to be immediately connected with the improvement of medical education or practice.

INTRODUCTION.

General Views on the Reform which the Healing Art requires, and on the necessity of again reducing it to that simple state in which it was in the time of Hippocrates, by uniting the practice of Physic with that of Surgery.

As public instruction is one of the principal foundations on which public liberty should rest, the numerous alterations in that part of Government, acknowledged to be necessary,

fary, cannot be too speedily accomplished. The most essential departments of literary education have been neglected; and, with respect to medicine, the Commissioners who have drawn up the following plan, have facts to represent, which appear to them to merit the greatest attention from the legislators of France.

They can with truth say, that there does not exist, within the kingdom of France, a single school of medicine, in which the fundamental principles of the healing art are taught to their full extent; that the medical profession is perhaps the only one, where the practitioner, formed by his own experience, does not serve as a guide to the student; that to become instructed by his own proper errors, is the only resource for the acquisition of knowledge, which is left for the young physician; that, in consequence of easy, and almost nominal examinations, the number of ignorant physicians and greedy quacks, is so much multiplied, that the fortune and health of the citizens, are every where liable to become their prey; that this numerous body persecutes with violence those who act differently from its members;

and that the public has but two often shewn itself obedient to its dictates; that the inhabitants of the country, still more unfortunate than those of the towns, affected with ruinous epidemics, have either remained without assistance, or been almost always consigned to the care of those whom their inexperience has rendered an additional scourge; that the medicines which are distributed among the people, faulty in their composition, and adulterated by improper mixtures, may be considered as so many poisons. They may add, that the healing art, practised by two classes of men, almost always enemies or rivals, has but too often proved fatal to patients concerning whom their disputes have originated. It will therefore appear necessary to reform so many evils, and to put an end to the dissensions between Physicians and Surgeons.

It may perhaps be necessary to detail these important truths more particularly, that they may be better perceived.

When the present mode of teaching the healing art is attentively considered, it can no longer be doubted that it is very imperfect.

For,

For, in fact, little can be expected from some years of study, passed in hearing or reading observations introductory to the practice of medicine, formed solely of dry and uninteresting definitions and divisions. What can be expected from schools, where neither Anatomy, nor the art of Dissection, nor Botany, nor Medical chemistry in its full extent, nor Pharmacy, nor the art of Prescribing; nor Nosology, nor the history of Medicine, nor the history of Diseases, are taught; where not a word is said on the public duties of a physician; where no one has an opportunity of practising at the bedside of the patient, and from which, in short, the students depart, without having acquired any of that knowledge which a practitioner of the healing art ought to possess? When the mode of teaching medicine is so foreign to the intended purpose, the Professors would act in contradiction to themselves, if they were severe in their examinations. Hence all those who offer themselves as candidates for degrees, are generally admitted to that honour. The thesis is defended by the Professor, while the candidate preserves a profound silence; and it will scarcely be believed;

that to such physicians, instructed in so inadequate a manner, and examined so slightly, the most sacred rights over the lives of the citizens are intrusted.

It is therefore highly necessary, that the young practitioner of the healing art, should endeavour to supply the deficiencies of his education by reading. But, whom has he to direct him in the choice of books? In a science composed of so many other sciences, who can point out what ought to be borrowed from one, and added to the other? The most sensible young practitioners observe attentively for a long time before they act, by which they do not at least counteract nature; but, an experienced guide, would lead forward him who deliberates. It would be of great importance for the young practitioner, to be allowed to accompany an experienced physician in his visits at the bedside; but he is also deprived of this mode of instruction; and, in short, no darkness can be more profound, than that by which he is for a long time surrounded.

If the practice of the healing art is ever attended with difficulties, it must be particularly so, when, during public calamities, it is directed

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ed towards the preservation of a great number of people collected together. But there is no school, where the mode of affording assistance, when an hospital, city, or district, is attacked with an epidemic, is taught. Physicians for the country are nowhere educated, although the education of such ought to be very different from that of physicians of universities and great cities; for they must learn the healing art, detached from every ornament, and reduced to those principles which are really useful, and which are of the greatest importance.

When the country, which ought to be an object of much attention, since it is the source of riches, is examined, it is found to contain physicians without experience, surgeons without knowledge, and quacks without honesty. It may therefore be doubted, whether, thus taught, and thus practised, Medicine can be considered as an useful science, and whether it deserves to be styled the *Healing Art*.

Besides, the contrast between the pretensions of those who have acquired or usurped the title to practise medicine, is very considerable. Some of the Faculties distribute two kinds of licences, the one for practising in the

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country

country only, the other in cities ; and, for the latter of these, more study is necessary, and more money is required. Others oblige the young physicians to reside for several years in the country, or in the suburbs, before they can be permitted to practise in a city. Some physicians are allowed to practise in small towns, who have no right to such privileges in large cities. In short, one would imagine, by such extraordinary regulations, that these places are not inhabited by the human race. And, besides, what should be thought of those distinctions of Licenciate, Doctor, Fellow, Regent, and not Regent, by all which a right of practising the healing art is understood, but, by which, certain unintelligible privileges are refused, which appear to be valued more than those circumstances which affect, in the most material degree, the lives of the citizens ?

There is, independent of the Faculties, a class of men, whom the public engages in the practice of physic, although, at first sight, they seem to be quite foreign to the Faculties, and are not in the smallest degree licensed by their statutes : these are the surgeons. Several of them

them, after having practised physic for a long time, have, it must be allowed, at last been able to learn that art. But, since the most urgent reasons induce them to practise it, the nation is very much interested that they should study it; and hence ought to oblige them to do so. It is therefore no longer merely expedient, but highly just, and absolutely necessary, that, for the future, every surgeon shall be a physician.

In order that this new arrangement be productive of the expected advantages, in the first place, the great number of persons who have not originally had proper education, (without which the knowledge of the art cannot be acquired), must be prevented from exercising the important functions of surgeons; and then it will be necessary, not merely to approximate, but to reunite, and to mingle together under the same roof, and in the same school, all the children of one family, too long divided among themselves. All division of interest ought to cease; and every one should, on the same terms, be allowed the same hopes, and the same privileges. It certainly cannot be denied, that surgery has always been regarded as a part of medicine; and it must be granted, that, from

the first lesson of theory, to that where the means of cure are pointed out, the education of physicians and surgeons has been conducted on the same principles. If this be really the case, no good reason can be alleged, why they should not both be taught in common; why the branches of a tree, which is weakened by being torn, should be separated from the very root; why there should be two distinct orders of colleges; or why two academies. A solemn festival ought to unite them together. In that event, the largest amphitheatres will with difficulty contain the students of medicine and surgery; the pupils of both will contend for the various places of employment in the public laboratories and hospitals, by means of industry and study; and the public, fatigued for so long a time by their disputes, will at last reap the advantages of that concord, which ought to unite them for ever.

By thus restoring surgery to medicine, and medicine to surgery, the moderns will follow more closely the laws of nature, from which they have improperly deviated since the time of the ancients. In the schools of Cos,
Smyrna,

Smyrna, and Alexandria, all the physicians were surgeons. The treatises of Hippocrates on surgery, are reckoned amongst the best of his works. Galen wrote on the same art, and practised it with success. In the time of Celsus, medicine was divided into three parts, the first of which comprehended the treatment of Internal diseases; the second, that of External ones; and the third part respected Dietetics, the knowledge of which is as necessary to surgeons as to physicians. In the time of Ætius, the physicians still practised surgery. This fortunate union of the two sciences, which should never have been interrupted, ceased when, on the decline of the schools of the Empire, Justinian withdrew the revenues of the Chairs, to bestow them on the Church.

The ecclesiastics then became the depositaries of all that was known in medicine, as of every other branch of knowledge; for they alone were capable of acquiring learning and sciences. But religious motives made them imagine, that they ought to abstain from the study of anatomy and surgery. The former of these arts became forgotten, and the practice of the latter, reduced to a very small number

number of operations, was intrusted to inferior people; and medicine, such as it was, taught in the most celebrated Colleges of Bagdad, Cordoué, &c. was a science of erudition, which consisted merely of repeating what had been already said. The sciences having at last been brought over to Italy, the universities of Bologna and of Padua, that of Montpellier, and afterwards that of Paris, began in the fourteenth century to teach anatomy; and surgery, studied by laymen, has since that time been gradually improved, especially in France, insomuch, that other nations have become jealous of it on that account.

Boerhaave has given a just idea of that science, by styling it a kind of medicine, which exhibits externally, the exact picture of the diseases which attack the viscera internally; and which, consequently, ought to form the first subject of the study of physicians. But it is also necessary, that the surgeons should study medicine; for there is scarcely any disease, even of the class of those called external or surgical diseases, which does not affect the general system, and, in the treatment of which,
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the surgeon can confine himself solely to the means furnished by his own proper art. But, however well disposed he may be to do so, it is not possible that he can call a physician to every patient. It is therefore only in dangerous cases, that people expect he should do so; in every other case, he exercises, in fact, without challenge, the two powers: hence it follows, that the physician and surgeon ought to be well acquainted with both the departments which each do profess, or rather, that they ought to study and practise them in common.

Those who may be astonished at this conclusion, ought to reflect, that the division of diseases into external and internal, being erroneous, the separation of medicine and surgery, founded on that division, must fall to the ground.

In this view of the abuses which must be reformed, the intention of the Commissioners is evident: they wish to offend no one, but they wish to speak the truth. They do not deny, that there are several faculties of medicine where several branches of that science are
usefully

usefully and faithfully taught. It is certain, beyond doubt, that, notwithstanding the faults of some schools, and the inutility of others, physicians of eminence have been educated at them: but it is also certain, beyond doubt, that, by a better disposition of affairs, a much greater number would be formed; and that the art, so much retarded in its progress, would make rapid advances in improvement. Those persons are blinded, and are to be pitied, who consider the corporations to which they belong, as the most perfect in the world; and who cannot believe any thing to be superior to their ancient customs.

They will some day be undeceived, and will think like the authors of the following plan, who enjoy before hand the pleasure which they will feel, when such persons, renouncing their prejudices, will commend a reform which has been necessary for so long a time, and which has been so often proposed in vain.

In order that this reform should agree with the new Constitution, the commissioners who have formed the plan of it, have thought, that the greatest liberty ought to be established,

ed, in teaching medicine both publicly and privately; and also in the practice of the art, in the succession and duration of studies, and in the works and correspondence which the physicians shall be invited to undertake.

1st, Agreeably to these principles, every man of the profession, having submitted to rigorous and legal trials, ought to have a right to teach in his turn.

2^d, He ought also to have the power of practising his art throughout the whole kingdom; for, in the eye of the laws, every citizen is equal.

3^d, The students ought also, to be under no restriction in their studies; and they should freely search after knowledge from every source.

4th, As the corporation spirit is the source of distinctions among the citizens, and from its nature, is quite opposite to public spirit, the inconveniences arising from the numerous corporations of physicians, ought undoubtedly to be avoided. The members of these corporations, under the pretext of watching over one another, establish an inquisition over several among them,

them, which must be suppressed in a free state.

5th, As the inhabitants of the country are perhaps the only persons to whom the healing art has not been really useful, particular institutions should be established for their benefit ; and the most numerous and certain measures should be adopted, in order that, in each canton, the subjects of public salubrity may be submitted to the direction of a well informed physician ; and that, in difficult cases, that physician may be aided, without delay, with the advice of the most skilful practitioners of the medical profession.

The commissioners have been guided by these principles, which will be found to be invariably observed in every part of the subsequent work.

In the *first* part of the following plan, the mode of teaching medicine, and every thing relating to it, is detailed ; in the *second*, the practice of medicine, as it respects public salubrity, is considered ; in the *third*, the medical police is exhibited ; in the *fourth*, every thing relating to the veterinary art, is pointed out ;

out ; and in the *fifth*, the manner of improving the healing art, is described *.

PART FIRST.

Of the mode of Teaching Medicine, and every thing relating to it.

CHAP. I.

Of Instruction in general.

As the same science is cultivated in various ways, and with different views, it is evident, that there ought to be several modes of instruction. Some students endeavour only to obtain useful principles : hence, all their wish is, to learn the method, and acquire the habit, of studying. Others are fond of theoretical speculations ; their active minds comprehend

* In the original, there is a sixth part, which contains an account of several essays received by the Société de Medecine, from its corresponding members, on the manner of improving the mode of teaching and practising medicine ; but as this constitutes no part of the plan which the Society have proposed, it seemed unnecessary to insert it.

comprehend every thing relating to the science which they study. For the former, elementary instructions, such as are already given in the Colleges, are alone necessary : but for the latter, a more extensive course of education is required. The investigations which it should include, ought to connect it with the works of the academies. For the elementary or practical instructions, a small number of professors should only be employed. They ought to confine their observations to leading principles, and should impress on the minds of their pupils, nothing but relative facts, useful articles of information, and invariable rules. For the academical instructions, on the other hand, it will be proper to establish a great number of Professorships ; to extend every species of instruction ; to present, in detail, every thing which, in the elementary courses, is treated compendiously ; and, to exhibit even what are merely subjects of curiosity, for what is superfluous, may, in that way, become necessary, by leading to important conclusions, and hence prepare, as it were, new materials for the arts. Thus the students will have access to every source of emulation ; and each may,
without

without restraint, adopt that plan of study which shall best suit his situation and abilities.

These views were not entirely disregarded by the former government. The instructions of the *College royale*, are really academical. In the greatest number of professorships established there, the lectures include nothing which is absolutely necessary for the acquisition of any degree whatever. The same observations may be applied to several branches of instruction instituted at the *Jardin du Roy*; and also, to the professorships of Mathematics, Experimental Philosophy, &c. founded in this capital.

But these detached branches of instruction, these scattered professorships, are only the fragments of a magnificent whole, which, it is the interest, and should be the glory of the nation, to establish and exhibit, for the admiration and imitation of all Europe. That beautiful plan proposed by Marfigli, which has necessarily remained incomplete at Bologna, ought to be executed at Paris in its full extent.

It is proposed, then, to establish in the capital of the French empire, a great Encyclopedical Institution, in which, under the same

management, several academical bodies shall be united ; some of whom shall be employed in promoting the progress of learning, and the arts and sciences ; and others shall be entrusted with the charge of various species of instruction, including every thing which can adorn or enlighten the mind ; or which the imagination can pursue.

The extent of this project may seem, at first sight, to require such an enormous expence, as to render it almost impracticable. It is, however, incumbent on great nations, to undertake great works : but besides, it may be easily proved, that the execution of the enterprise will be neither very difficult, nor very expensive.

In the first place, it will not be necessary to collect in one place, all the professorships : it would even be an error to attempt it ; an error indeed, which Marfigli, in his institution, has committed.

It will be sufficient that all the branches of instruction shall be established ; that they be all connected by invariable ties ; that they form part of one system ; and that they be governed by the same principles, and subjected to the same

same authority. Several species of education, ought undoubtedly to be taught at a distance from the capital, which should form the centre of the institution, without comprehending all its branches. Thus, those works of art, for the acquisition of which, a knowledge of some parts of the determinate sciences is necessary, may be reduced to a certain number of classes. The most necessary and useful arts should be taught principally in the neighbourhood of great manufactories, and in those cities where their several branches are carried on with the greatest success and celebrity. The arts and sciences which relate to Navigation, should be explained in the sea-port towns of the kingdom; and those which relate to Tactics, Artillery, and Fortification, in garrisoned cities. Mineralogy ought to be taught in the neighbourhood of great mines. At Paris, the fine arts should keep up the honour of the Louvre. Medicine ought to be studied in hospitals; and the languages, history, and the belles lettres, in the Bibliotheque du Roy, and in the College royale. The Jardin du Roy, should be appropriated to natural history; and in one of the antient monasteries of the capital, the remaining de-

partments of this great institution may be established.

In the second place, the execution of this project will not be productive of much expence; for the greatest number of the proposed professorships is already established and endowed. Some additional encouragements to those who profess the arts of commerce and of war, will induce them to teach the principles of these arts; and the greatest number of new professorships, should be allotted to members of the academies, who will be contented with a moderate addition to their present salaries.

It is unnecessary, however, to state to the representatives of the nation, that the charges incurred in the cultivation of learning, and of the arts and sciences, are to be considered as the most necessary of all expences; for the progress of knowledge is essentially connected with the public safety and prosperity, as the people can only prove themselves deserving of liberty, by becoming enlightened.

By following Bacon's table of the branches of knowledge necessary for mankind, or that which, in imitation of him, the illustrious authors of the *Encyclopædia* have placed at the
beginning

beginning of that great work, no article of importance will be overlooked; and all the parts of this new system will be linked together.

By this means, the places in this system, which medicine and surgery, as they relate to man and other animals, ought to possess, will be ascertained. All the superfluous observations introduced in the elementary instruction of these sciences, shall be carried back to their proper places, in order to satisfy the curiosity of those students, who, from being engaged in particular investigations, or in learning the great art of teaching, or, solely, from a wish to indulge their taste, may choose, although attached to one science, to study, and to be acquainted with all.

CHAP. II.

Of particular Instruction.

MEDICINE and Surgery shall be taught in two ways, viz. in colleges and in practical schools in the several districts, for the instruc-

tion of physicians and surgeons in the country. In the former, the several branches of medical education shall be complete; in the latter, however, they must be frequently imperfect; and therefore, the studies of the pupils belonging to them, ought to be continued at the colleges.

SECTION I.

Of the Mode of teaching Medicine in Colleges.

§ I. Of the Order and Division of Professorships.

IN the medical colleges, the instructions must relate to five principal subjects:

1. The knowledge of the animal œconomy. This is acquired by the study of Anatomy, Chemistry, and Physiology, or the natural philosophy of man in health.

2. The knowledge of the substances, both simple and compound, which act on the animal œconomy. These necessarily belong to one of the three kingdoms of nature. Their history, qualities, &c. are learned by the study of
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of the Materia Medica, Chemistry, and Pharmacy.

3. The choice of the means most conducive to the preservation of the body in a state of health. For this purpose, the study of Natural Philosophy, Chemistry, and Physiology, is necessary.

4. The knowledge of the various diseases, of their symptoms, their nature, and the remedies most capable of curing them. This is learned by the study of Pathology, or of the natural philosophy of man in a state of disease; of Semeiology, Nosology, Therapeutics, and Clinical Medicine and Surgery.

5. The history of medicine and surgery, and the best manner of studying these sciences. By this, a complete view of the healing art, in its whole extent, will be exhibited. What has been done, and what remains to be accomplished, will thus be seen.

The various subjects, therefore, of these instructions, arranged in an elementary order, are,

1. The plan of studying Medicine.

2. General and experimental Natural Philosophy,

losofhy, in fo far only as it is connected with Medicine.

3. Chemistry.
4. Anatomy.
5. Phyfiology.
6. Materia Medica, comprehending every thing useful in the healing art, which Zoology, Botany, and Mineralogy, afford.
7. Pharmacy.
8. The Art of Prescribing.
9. The general means of preferving health, or Hygieine.
10. Pathology.
11. Semeiology.
12. Nofology.
13. Therapeutics.
14. The Medical and Chirurgical treatment of difeafes.
15. Clinical Medicine and Surgery.
16. The hiftory of Medicine and Surgery.

Under another point of view, thefe different branches of medical instruction ought to be divided into Theoretical and Practical.

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The theoretical medical sciences, consist of preliminary sciences, and those which are immediately necessary.

The former comprehend Anatomy, Chemistry, Physiology, Pharmacy, and Materia medica.

The object of the latter, is to apply these preliminary sciences, to accomplish the preservation of health, and cure of diseases. These direct or immediately necessary theoretical sciences, are Hygiene, or general means of preserving health, Pathology, Semeiology, Nosology, and Therapeutics.

The practical department of medicine, consists in distinguishing and treating diseases.

Since it is necessary to entrust to a certain number of persons, the charge of teaching these different branches of the healing art, while, at the same time, it is neither possible nor eligible, that there should be as many professors as there are divisions in the above table; proper measures must be adopted, in order that several departments shall be taught by single professors. This has always been done at Leyden, at Edinburgh, and at Göttingen. Boerhaave taught five of the most important

portant branches of medicine, viz. Chemistry, Physiology, Botany, and the Institutions and Practice of Medicine.

If a single man possessed such an extraordinary degree of genius, and such a share of health, as to be able to teach all the departments of medicine, the students would derive the most important advantages from his labours; because every part of the whole system would be consistent with another. In proportion as professors are multiplied, there will be danger of contradictions in their instructions, and of inferiority in their talents.

The following motives, render it proper to unite several branches of instruction.

1. Anatomy may be separated from physiology; but physiology cannot be taught by itself: it ought to be conjoined with the study of the human body; otherwise, every physiological system will be erroneous.

When the anatomy of the human body is considered separately from that of other animals, many important views, necessary references, and useful conclusions, are lost. Several of the animal functions are even inexplicable, without the assistance of comparative anatomy,

anatomy. The charge of teaching Zoology, ought therefore to be intrusted to the professor of anatomy and physiology.

2. Mineralogy cannot be understood by confining the observations to the external appearances of the various minerals: the changes which they suffer by the operation of chemistry must therefore be detailed. It is easy for the chemist to teach Pharmacy; and the art of prescribing is intimately connected with the science of Pharmacy. All these departments of the art ought therefore to be taught by the same person.

3. The Professor of Materia Medica, must necessarily be very well acquainted with natural history. The study of the three kingdoms of nature, ought to be very familiar to him. He should therefore be capable of giving lectures on Zoology, Mineralogy, and Botany. But as the two former of these departments are properly assigned to the Professors of Anatomy and Chemistry, it will not be considered improper to require, that the Professor of Materia Medica, should also teach Botany, not only in a Botanic garden, containing the usual officinal plants, and in the fields, but al-

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so in hot-houses, to make the pupils acquainted with the exotic plants used in medicine.

It may here be remarked, that the Professor of *Materia Medica*, after having exhibited a complete history of the various medicines, and after having shewn specimens of each, ought to content himself, both in his lectures on *Materia Medica*, and on Botany and Pharmacy, with enumerating the qualities and doses of the medical substances; and should refer to the Professors of Therapeutics, and of the Practice of Medicine, the charge of explaining the principles which regulate their use, and their *modus operandi*; and to detail the particular cases in which they should be employed.

Without this restriction, *Materia Medica*, Botany and Pharmacy, could not be classed among the preliminary sciences; and a confusion in the duties of the professorships would thence ensue.

4. No physician ought to be ignorant of Natural Philosophy; it ought always to serve as a guide in the study of the preliminary sciences. For this reason, all the medical professors should be capable of teaching it; but no professor is required to excel in that science

science so much as the Professor of Hygiene. He will, therefore, without any difficulty, be able to give a course of lectures on Natural Philosophy ; a science, to which his attention cannot be too often directed.

5. Pathology, Semeiology, Nosology, and Therapeutics, ought not to be taught separately from each other : For it certainly is the duty of the same professor, to consider man in a state of disease ; to exhibit the symptoms of the complaints, the causes of which he shall have explained ; to ascertain, from the history of the symptoms, the nature of the disease, that of its stages or periods, and the prognosis ; and to point out on what principles the treatment ought to be conducted.

It may be added, that one of these four branches, which, it is proposed, shall be taught by one Professor, *viz.* Semeiology, cannot be explained by itself, without occasioning numberless repetitions, and a great confusion of ideas, since the detail of the symptoms of diseases is included in Pathology ; and the same detail is the subject of Nosology, which forms the base of the observations of the Professor of the Practice of Medicine.

6. The Professors of the Practice of Medicine, should teach that great and noble science in its full extent.

Their courses should occupy two years; one of which ought to be appropriated to Acute, and the other to Chronic, diseases; but they should give these courses by turns; so that, while one is employed in detailing the treatment of acute diseases, the other should be engaged in treating chronic ones. By this plan, the students will have an opportunity of attending a complete course every year.

7. The Methodus studii, cannot be pointed out with more advantage, than by the professor of the history of medicine, who must necessarily have occasion, every day, to observe the succession of works which are undertaken to advance the progress of that science.

Guided by these motives, after many trials, the following distribution of all the different departments of Physic and Surgery, among ten professors, is proposed.

1. A course of lectures on Anatomy, including Physiology.

2. A course of lectures on Zoology.

These

These two courses shall be given by the same Professor.

3. A course of lectures on Chemistry, including Mineralogy.

4. A course of lectures on Pharmacy, including the Art of Prescribing.

These two courses shall be given by the same Professor.

5. A course of lectures on Materia Medica.

6. A course of Botany.

These two courses shall be given by the same Professor.

7. A course of lectures on experimental Philosophy, with its application to Medicine.

8. A course of lectures on Hygiene, or the general means for the preservation of health.

These two courses shall be undertaken by the same Professor.

9. A course of lectures on the Theory or Institutions of Medicine, including Pathology, Semeiology, Nosology, and Therapeutics.

This course shall be given by one Professor.

10. & 11. A course of lectures on the Practice of Physic, including the medical treatment

treatment of diseases, Clinical Medicine, properly so called, and Medical Jurisprudence.

For this course there shall be two Professors. The course shall be divided into two parts, the one consisting of observations on acute, and the other on chronic, diseases; and it shall occupy the space of two years. The Professors shall undertake these parts of the course alternately.

12. & 13. A course of lectures on the Practice of Surgery.

There shall be two Professors for this charge. The course shall be divided into two parts, and shall continue for two years; one year to be chiefly dedicated to Midwifery. The Professors shall, by turns, undertake the departments of Surgery and Midwifery; and one of them shall teach Chirurgical Jurisprudence.

14. A course of lectures on the history of Medicine and Surgery.

15. A course of lectures on the *Methodus studii et observandi*. This subject is one of the most philosophical which can be presented to the consideration of students.

These two courses shall be intrusted to the same Professor.

It must be observed, that none of these Professors ought to be allowed to teach privately. They should not be liable to the suspicion of neglecting, through interested motives, their lectures in the College, in order to enhance the value of their private lectures.

The same branch of instruction ought, on no account whatever, to be intrusted to two Professors ; one of whom, under the title of *Regius Professor*, lectures ; and the other, under that of *Demonstrator*, describes and demonstrates. That barbarous custom, though still retained in some faculties, should be considered as the remains of antient ignorance ; it excites jealousies among the Professors, and it shocks the students ; it ought to be exploded from modern schools, as it occasions tedious, contradictory, and tiresome discussions.

If a medical college should be established in a city, where, from motives of œconomy, or from the students not being sufficiently numerous, it should become necessary to restrict the number of Professors, it might be reduced to seven, by allowing only one Professor for the Practice of Physic, one only for that of Surgery, and by assigning to the Professor

of the History of Medicine, the charge of the lectures on Natural Philosophy and Hygiene.

Reflections.

AFTER having thus arranged the order and distribution of the professorships, a few important reflections may be added.

Hitherto, medical instruction has consisted only in words, which is the reason why so little advantage has been derived from it ; whereas, on the contrary, it ought to be founded principally on facts.

Natural Philosophy, Natural History, Anatomy, Chemistry, and Clinical Observations, are the foundations on which the structure of the medical institution, considered in its full extent, ought to be placed. All the truths of which these sciences consist, are deduced directly from experiment ; and if there are some branches of instruction, such as, certain parts of Pathology and Therapeutics, which cannot be proved in the same manner, they must be connected with experiments and observations, by a chain of inferences. All the observations must be referred to principal facts ; all the

the degrees of uncertainty must be distinctly marked ; in short, the professors should, in their remarks, be explicit, distinct, decided, and ought always to adhere strictly to truth. These advices are principally directed to the professor of the Theory of Medicine. The other professors will be constantly led to make general remarks from the nature of their subjects. But he will certainly wander, if, having no object of demonstration to place before his pupils, he do not restrict himself rigorously to circumstances, with the truth of which he is intimately acquainted ; to observations deduced from facts ; and to that plan which he shall have formed in silent meditation and study.

The professors must carefully avoid enlarging on discussions which relate solely to learning ; a common fault of those who are directed by the opinions of others. When an explanation is given of what has been said by others, it becomes particularly necessary to be concise. The professor of the History of Medicine, ought to set the example of such caution ; he should trace cursorily the several remarkable æras of medicine ; he should compare

different sects, by contrasting their principles; he should ascertain the local modes of practice, which the nature of different climates require; and, without ever entering into useless investigations, he should point out, amidst the contests of all sects, what are to be regarded as truths; and he should explain the chief causes which have constantly led to error.

The professor of the History of Medicine, would be of very little use to the students, if, after the example of several great men who have pointed out the method of studying the healing art, he should content himself with giving them a numerous list of books of all kinds. The students only require to be directed in their choice of books; and the real principles of the art will be found in the works of a small number of authors. The young physicians, after having for some time studied the books containing the elements of the art, should read, with care, those original works which bear the stamp of nature. Copyists have taken these works to pieces, and have disfigured them; copyists should not therefore be read: and, by that reform alone, the tasks which young physicians, with little consideration,

consideration, have generally undertaken, will be very considerably lessened. Besides, it is less necessary to point out the order of reading, than to regulate the direction of the mind. The students ought to be obliged, not merely to study the works of others ; they ought to make observations, and to undertake experiments ; and it is on that latter occasion, that the advice of a well informed physician, will prevent their falling into great errors, and will contribute much to their improvement.

Chemistry, Natural History, Botany which forms a part of it, and all the sciences which have been termed Preliminary, ought to be taught in such a manner, that their connection with medicine may alone be exhibited ; for as these sciences are become very diffuse from their extent, few men possess memories capable of digesting such extensive details, and few persons have genius enough to profit by them.

While the preliminary sciences should be abridged ; the immediately necessary sciences, and the practical department of medicine, ought to be detailed in a very full manner. The instructions in Hygiene, or the general means

of preserving health, and in Clinical medicine, will be institutions perfectly new in France; for Hygiene, in the manner in which it has hitherto been taught in Colleges, comprehends only a few trivial facts: and instructions in the Practice of Medicine, so long wished for, are still unknown in France.

The whole of the proposed system, shews the intimate relations by which surgery is connected with medicine: it was only necessary to add the two professorships of the Practice of Surgery, to complete the picture.

No particular mention has been made of the art of the Dentist, Oculist, &c. from the conviction that these small parts of a great whole, which have been considered as too important, and of which some dexterous persons have made a separate profession, cannot be well taught, but along with the fundamental principles of the science in general; without the knowledge of which, such persons are commonly very ignorant, and very greedy.

It may be objected, that several of the sciences included in the table, such as Zoology, and the History of Medicine, do not afford essential information to those who dedicate themselves

themselves to the Practice of Medicine ; and that there are others, such as Natural Philosophy, with which the students are supposed to be acquainted, before they enter schools of medicine.

But it may be observed, that in a course of public instructions, which, in Colleges, ought to be complete in all its parts, a provision must be made, not solely for those who do not extend their views to any thing which is not absolutely necessary, but an opportunity must also be provided for satisfying the laudable wishes of those possessed of more enterprizing minds. The Professor of Anatomy, to whom the instructions in Zoology are intrusted, ought therefore to avoid all discussions which are foreign to the designs which he should keep in view. It is true, that it is not indispensably necessary for physicians to study the structure of animals ; but it must be allowed, that there are some who ought to be acquainted with the elements of rural œconomy, and of the veterinary arts.

The Professor of the History of Medicine, and of the *Methodus studii medici*, should be an useful guide to the students ; and his duties

should be truly paternal. Besides, it is to be remarked, that these various subjects ought not to form part of the public examinations; for the students should be encouraged, and not constrained to attend to them.

With respect to Natural Philosophy, the elements of that science should not be taught; its application to medicine should alone be pointed out; a circumstance which is so much overlooked, that those who prepare themselves for the study of the healing art, cannot be too often reminded of it. The Professor of Hygiene, to whose charge the instructions in Natural Philosophy are consigned, ought therefore to confine himself within the limits which his duty prescribes, beyond which he cannot wander, without being necessarily recalled by reason, and by the murmurs of his pupils.

The professors ought not to dictate any syllabus; if they adopt any particular text-book, they must publish it; if not, they should point out those publications which are most conformable to their plan. They ought sometimes to descend to familiar instructions, by interrogating the students, in order to make them understand properly the principles of what they teach.

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The long discussions, and misplaced digressions, with which those professors, who have ill digested their plan, indulge themselves, should be carefully avoided; and, in order to accustom the professors to study arrangement, and for the sake of those pupils who have not much time to spend in study, it would be of consequence, that each annual course of lectures were terminated by an abridgment of the whole course; in which, within a small number of lectures, in a simple order, every thing of importance, which each section of the proposed table contains, should be collected.

The execution of this regulation will be equally advantageous for the professors and students.

§ II. *Of the Fees of the Professors, and of the Sums to be paid by the Students* *.

ALL the Professors of the Preliminary Sciences, and of those which relate immediately

* In the original, § II. is intitled, “ On each Professorship, considered separately;” but, as it consists merely of the repetition of a few general reflections, and of a reference to the fourth chapter of the second part, the translator has taken the liberty to leave it out.

ately to the study of medicine, (being six in number), ought to receive the same fees, and should be compensated for the prohibition of teaching privately.

The two, or four Professors, of the Practice of Medicine and Surgery, who have the charge of two departments, *viz.* the Treatment of Diseases, and Clinical Medicine or Surgery, and must therefore spend a great part of each day in the hospital to which they belong, ought to have fees double of those which are allotted to the former professors.

In this arrangement of the fees for the professors, the proportions should be fixed in such a manner, that part should be paid from the public treasury, and part by the students, who shall be allowed to attend, without any restraint, those lectures which they shall have voluntarily chosen. Thus, private teaching, which ought to be much encouraged, will be put in competition with the public courses of instruction; which will oblige the professors, from interest and ambition, to bestow much pains on their lectures. It is, however, to be understood, that proper measures shall be adopted, for allowing those students who are unable to afford the

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the fees, to attend, gratis, the several courses. The Directories of the departments and districts, shall make these provisions ; as will be particularly mentioned, when the assistance to be given to the indigent sick of cities, and of the country, is pointed out.

The sum to be paid by students for instructions, should be very moderate ; it ought not to exceed, for each, for the whole period of their studies, the sum of 500 or 600 livres *.

It is of importance, to remark, that this expence shall be the whole to which students shall be subjected ; for the examinations, as well as the admissions as physician, &c. ought to be perfectly gratuitous. Unless this clause be considered as constitutional, all the abuses which it is so necessary to reform, will be again renewed.

§. III. *Of the Constitution and Inspection of the Medical Colleges.*

1. EACH medical college shall be composed of ten or seven professors, and a secretary.

2. At

* viz. 20l. 16. 2d., or 25l. Sterling.

2. At the beginning of each session, the professors shall choose one of their number to preside at all public business. But the president shall, on no pretext whatever, continue in office more than six months.

3. In all public ceremonies, the rank which the professors shall hold, next to the president, shall be determined by their seniority in the exercise of their public duties of instruction.

4. The professors shall have no influence nor right of superintendence over the other physicians of the city or district in which they are placed, nor, except within the college, over the students who shall be governed by the public police.

5. All the authority with which the professors shall be vested, shall be employed in the public or private business at which one of them presides: as they are to be regarded as the principals, they shall be obeyed in every thing relating to the police of the college.

6. The professors shall elect one of their number to discharge the duties of librarian; and another, to whom the care of the museums of the college shall be entrusted.

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These professors will have, as shall be afterwards specified, pupils under their direction, who shall perform the drudgery of these different employments. These elections shall be renewed every two or three years.

7. The medical professors shall confine themselves to their respective duties, to which they should dedicate themselves entirely; and, without undertaking any other charge, they ought to obey, in quiet, the laws by which they shall be governed.

8. Three censors chosen by the electoral body (specified in § V.) of the physicians of the district of the college, shall be appointed, to see that all the branches of instruction, the decisions in the competitions for professorships, and the examinations and admissions of practitioners, shall be carried on according to the regulations. They shall visit the college as often as they can; they shall assist at all the public business of the college; they shall attend to the complaints of students, when necessary; and they shall lay their remarks before the Ministers who shall have the superintendence of public instructions. These censors ought to be renewed every two years; and,

and, before going out of office, they ought to give a public account of the commission with which they had been entrusted.

§ IV. *Of the Number and Jurisdiction of the Medical Colleges.*

MEDICAL colleges, may be styled public bodies, composed of professors appointed to teach every department of the healing art; and authorised to admit physicians and surgeons to the right of practising in every part of the kingdom, without exception, according to regulations determined by law.

Such bodies ought not to be numerous. If they were too much multiplied, the places of professors, less honourable, and less lucrative, would be less eagerly sought; the duties of teaching would be less faithfully fulfilled; the admission of practitioners would become more easy; and hence, all the advantages of the reform which is wished to be executed, would be lost.

These colleges should, therefore, be only four or five in number. One should certainly be founded at Paris, another at Montpellier,
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one at Strasbourg or at Nancy, Besançon, or Dijon, and perhaps two others; of which, one may be at Nantes or Rennes, and the other at Bourdeaux.

The circumstance which renders it proper to establish one of these colleges at Strasbourg, is, that as the faculty of medicine of that city, has, for a long time, been very much celebrated, students repair thither from every part of Germany; which would no longer happen, if the medical college were transferred to any other place.

With respect to the cities of Bourdeaux and Nantes, these seem the most convenient, on account of their distance from Paris and Montpellier. Besides, these cities, from their population and opulence, are well calculated to encourage eminent physicians and surgeons to settle in them.

It is also to be remarked, that the students of surgery being united to those of medicine, will form a great number of pupils; the greatest part of whom, not being much indebted to fortune, will not be in a situation for making great journeys, and therefore, five colleges will not be too much for their reception.

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It will be mentioned, when treating of competitions for vacant professorships, that the examiners or judges shall be chosen by an electoral body, formed of a certain number of the electors and physicians of the department. It may be added, that all the physicians within the jurisdiction of the college, shall be invited to attend the meeting, at which, the electors who shall name the judges of the competition, are to be chosen. It is therefore necessary, to determine the jurisdiction of each of these colleges *.

The following division is proposed :

1. The college of Paris shall comprehend twenty-four departments.
2. The college of Montpellier, shall include twenty-one departments.
3. The college of Strasbourg shall comprehend thirteen.
4. The college of Bourdeaux, the same number.
5. The college of Nantes shall include twelve departments.

Each

* In the original, the various departments of each college, are specified ; but these cannot be interesting to an English reader.

Each college shall publish, annually, a list of the medical practitioners of its jurisdiction, specifying their names, the date of their admission, their places of abode, and the duties with which they are charged.

Reflections.

IN the above table, the jurisdiction of the college of Paris, is the most extensive of any. That capital being placed nearly in the centre, and its connections with other places, as well as its hospitals, being necessarily more numerous than those of any other city in the kingdom, no inconvenience will result from that arrangement.

The jurisdiction of the college of Montpellier, is more extensive than that of the other three colleges, on account of the situation of the city, and the great reputation which its present college enjoys.

The number of departments allotted to the other three colleges, is nearly equal.

These various jurisdictions, will facilitate the meetings of the physicians of the several de-

partments, when they are summoned to elections, or on any other occasion.

It is to be understood, that the arrangement of these jurisdictions, does not, in any way, affect the medical studies, nor the admissions to the degree of Doctor, as every person shall be entitled to apply for instructions or degrees, to any of the five colleges which he may prefer.

§ V. *Of the Competitions for Professorships, and the Choice of Professors.*

THE choice of professors is of great importance. Through their means, emulation and proficiency are diffused; and experience has proved, that a single great man in any college, may render it the most celebrated in the world.

There are three ways by which a judgment may be formed of those who offer themselves candidates for a vacant professorship, viz. by their reputation, by their publications, and by their answers in the competition.

The two first means are insufficient. So many circumstances affect reputation, that the
world

world is every day deceived in the characters of men. Publications are often not the works of those who pass for the authors ; and besides, many excel in writing, who are unable to speak in public ; without which qualification, little success in teaching can be obtained.

An election by vote, without competition, has been proposed ; but it is well known, that places are often disposed of by intrigue ; and that the jealousy of those of low abilities, never fails to set aside men of superior talents, whose merit must be publicly known, to command all the votes.

The mode of competition must therefore be chosen ; no other can be substituted.

It may be conducted in the following manner :

1. Four months before the competition shall begin, the Procureur-Syndic of the department where the professorship shall be vacant, shall give notice, by means of the public papers, to all domestic and foreign practitioners of medicine, that the professorship of ———, is vacant in the city of ———, department of ——— ; and that the competition for filling it up will commence on ———.

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2. Every

2. Every person, whether natives or strangers, may compete. The competitors will not be required to produce the degree of M. D.; for some may excel in particular departments of the theory of medicine, without being very intimately acquainted with the practice of that art, and, consequently, without having received a degree.

3. The competitors shall send their names to the Procureur-Syndic of the department. The only requisite for their admission to the competition, shall be a certificate of their good moral character, signed by the Magistrate of the country where they generally reside.

4. The censors or judges of the competition, shall consist of five persons; of whom, two shall always be chosen among the professors of the college in which the vacancy shall have happened, and three among the physicians of the departments included in the jurisdiction of the said college.

5. These censors or judges of the competition, shall be chosen by an electoral body, consisting partly of a certain number of the electors, and of a certain number of the physicians of the departments. For this purpose, all the
medical

medical practitioners within the jurisdiction of the college, shall be requested to attend the meeting, at which the physicians, who shall be members of the electoral body, are to be chosen. The only qualification for the medical electors, is a year's residence in any of the municipalities within the jurisdiction of the college; for ascertaining which, a certificate must be produced, signed by one of the municipal officers. The proportion of the electors appointed by the electoral body of the department, and of those appointed by the medical practitioners, shall be determined by the regulations which the National Assembly shall have decreed for analogous elections; and shall, in every respect, be conformable to the principles of the Constitution.

6. When a college shall be founded, and where, consequently, there shall have been no professors before that time, the electors shall choose the five judges of the competition, from among the medical practitioners of the departments within the jurisdiction of the college.

7. Three members of the directory of the department, shall attend all the meetings for the competition; and every thing not done in

presence of them, shall be considered as void and null. The three censors of the college, chosen by the electoral body of the department, shall also attend these meetings.

8. As the students of medicine are much interested in the proper choice of a professor, they shall be consulted on the subject; therefore, the students who shall have passed with applause the two examinations on the theoretical branches of medicine, shall have a particular place in the hall where the competition is to be held, allotted to them; where those who may desire to vote, shall be obliged to attend regularly. They shall, every day, sign their names on a register for the purpose, that their attendance may be certified.

9. The remaining part of the hall shall be possessed by the public, who ought never to be excluded from places where their interests are engaged.

10. The five judges of the competition, shall name one of their number to preside; he shall be the moderator in their public business. In all their other duties, the five judges shall follow the order of seniority.

11. The questions and answers shall be, in
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the same manner as the lectures, in the French language; in order that the merit of the competitors may be more easily and more generally ascertained.

12. The examination shall consist in written questions; to which, the competitors shall answer *viva voce*.

13. The judges of the competition shall meet some days preceding the examination, to prepare the questions which they mean to put.

14. Each competitor shall answer twelve questions; therefore, the number of competitors multiplied by twelve, will ascertain that of the questions which the judges must prepare.

15. These questions shall be contrived in such a manner, as to comprehend the whole extent of the science which shall be the subject of examination. But, in order that the competitors, in the distribution of these questions, may be examined on different parts of the science, the notes on which the questions are written, shall be divided into twelve parts, each of which shall be assigned to one of the principal departments of the science; and these twelve parts

shall be distributed successively at twelve different times, in the following manner :

The notes forming the first part, shall be put, properly folded, into a vase ; from which, each of the competitors shall draw one ; on the back of which, he shall write his name, without opening it ; and shall then deliver it to the president. These notes shall be replaced in the vase ; and the competitors shall answer, as the notes, on which their names are written, shall be drawn by lot. One of the members of the directory, shall be requested to draw the questions from the vase, as they are required. The same method shall be adopted for the remaining eleven parts. The answers of the competitors, shall be in the style of lectures on the several subjects.

16. After the examination is finished, the decision shall be determined in the following manner :

(1.) The students described in the 8th article, whose names are written each day of the competition on the register, shall be called according to the alphabetical order of their names. Each of them shall put into a vase, placed before the president, a slip of paper, on which
shall

shall be written the name of that competitor whom he shall believe most capable of fulfilling the duties of the vacant professorship. The vase shall after this remain covered, till the votes shall be reckoned.

(2.) The competitors shall be next called, also in the alphabetical order of their names, and each shall put into another vase, a slip of paper, containing the name of the person among themselves, whom he shall judge to be best informed. This vase shall also be covered till the votes are reckoned.

(3.) Lastly, the judges of the competition shall be called on by the president; and their votes shall, in the same manner as the others, be deposited in a vase.

17. The president, accompanied by the members of the directory, the three censors, and two of the competitors, shall then proceed publicly, and without delay, to the examination of the three vases. The plurality of votes of the students shall be reckoned as one, and that of those of the competitors as another: these two votes shall be balanced with those of the judges of the competition; and
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the professorship shall be adjudged to the candidate in whose favour there is a majority.

18. In the event of an equality of votes, the votes shall be again called for the two candidates for whom they had been divided, and the majority shall decide.

It is probable, that the judges, the competitors, and the students, thus opposed to each other, will be obliged to be just; and that the candidate of merit, will be as certain of success in the competition, as it is possible to be.

The professors thus elected, should hold the office for life, or, at least, they ought not to be removed, but after a considerable space of time, as twelve or fifteen years perhaps; and they ought even then to be continued, if the public be pleased with them; for, as a professor cannot excel in any particular department of instruction, without attaching himself entirely to it, it is just that he should enjoy, as long as he merits it, the advantage resulting from that attachment. Besides, experience has proved, beyond a doubt, that those who are elected for a short space of time only, do not engage in the duties of office with sufficient zeal.

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The superintendence of the three censors, mentioned in § III. ; the public account which they must render ; the complaints of the students, to which they shall be obliged to attend ; and the competition of private courses of lectures, which will be preferred to theirs, if they are negligent in their instructions ; will certainly be sufficient to induce the professors to attend to their duty, or to recal them to it, if they should happen to stray.

But, in order to prevent that inconvenience with more certainty, if it should appear necessary that the professor of each branch ought to be re-elected after twelve or fifteen years, it may be done in the following manner :

1. The electoral body shall be summoned in the manner already fixed, and shall name five judges.

2. The students who shall have passed the two examinations on the theoretical parts of medicine, shall be also assembled.

3. The five judges, and the students, shall decide, by separate ballots, if there shall be occasion for a new competition for the professorship.

4. The majority of votes of the students shall be estimated at two; and these shall be balanced with those of the judges separately.

5. If the majority of these votes, which shall be reckoned seven in number, decide that there shall be a new competition, it shall be conducted in the manner already described; if not, the professor shall continue to exercise the duties of his office.

§ VI. *Of the order and duration of the Medical Studies, and of the Examinations of Students.*

THE Faculty of Medicine of Vienna, the establishment of which is very recent, since it is the work of Van Swieten, prescribes five years of study to the pupils. The first year, they are desired to study Anatomy, Botany, and Chemistry; the second, Physiology is added to these; during the third year, they must continue the study of Physiology, and add that of Pathology and the Materia Medica; during the fourth year, they join to these two latter branches of medicine, the study of the Practice of Physic; and, during the fifth year, continuing to pay the greatest attention to the
Practice

Practice of Medicine, they must recapitulate all the other branches.

In several German universities, the classes are opened after Lent, for the Summer session. There are six weeks of vacation; and the classes are again opened on the day after the festival of St Michael, for the Winter session. M. Zenker, physician at Berlin, who has sent to the Société de Médecine, a very instructive essay on the German universities, mentions, that in some of them the duration of studies is three, and, in the greatest number, five years. In some, the first year of medical studies is dedicated to Logic. In the college of Salerno, the medical pupils are obliged to study that department of philosophy, for several years preceding the commencement of their medical studies. In Prussia, the course of studies is not entirely finished within five years; for it is required of the young physician, at Breslaw and at Berlin, that he shall dissect publicly; and that he shall prescribe, in a case of the Practice of Medicine, which is proposed to him. At Mayence, the regulations are the same; and at Vienna, when De Haen and Stoll, taught Clinical medicine there,
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the candidates were required to take charge of several patients under the care of the professors, before it was determined whether they should enjoy the privileges of a medical practitioner.

M. Tiffot, who has written very well on this subject, advises only four years of study. He prescribes, for the first year, the same courses as Van Swieten does: for the second, he advises the same courses which Van Swieten has allotted for the third, with the addition of the study of Surgery; of which no mention is made in the distribution of the professorships of the Medical Faculty of Vienna: for the third year, he recommends the study of the History of Medicine, of Hygiene, of Medical Jurisprudence, and of Clinical Medicine; on which latter, the students ought to be required to spend exclusively the fourth year.

Several members of the Society of Medicine of Paris, who have considered this subject, and who have communicated to that Society the result of their deliberations, are of opinion, that the duration of Medical Studies, ought to be

be for at least six years ; during which time, they prescribe the following course of study :

1st Year. Natural Philosophy, in so far as it is connected with Medicine, Anatomy, and Physiology. The students should begin to learn the art of Dissection.

2^d Year. Continuation of the preceding studies, Dissection, Chemistry and Mineralogy, Zoology and Botany.

3^d Year. Continuation of Anatomy, Chemistry and Botany, to which shall be added, Materia Medica, Pharmacy and Hygiene.

About the middle of this year, the students shall begin to attend the wards appropriated for the Practical or Clinical Instructions. They shall attend a course of lectures on the operations of Surgery, of which they shall study the elements. They shall, in their attendance on the Clinical wards, follow that professor only who shall be intrusted with teaching that branch of medicine.

4th Year. Continuation of Materia Medica, Pharmacy and Hygiene, and the Institutions of Medicine, that is, Pathology, Nosology and Therapeutics ; all which shall be taught by the same professor. The students shall

shall learn the manner of applying bandages, and shall practise the operations of surgery on the dead body. They shall begin the study of Midwifery; and shall attend, for the first time, the lectures on Clinical Medicine.

5th & 6th Years. These shall be dedicated to the study of Clinical Medicine and Surgery. The pupils shall study, at the same time, Medical Jurisprudence; the elements of which, one of the professors of the Practice of Physic shall teach them, and also the History of Medicine.

Several very forcible reasons, however, appear to render it inexpedient, that the arrangement and duration of the studies should be fixed by law.

A father ought to be authorised to educate his son under his own eye *. It is proper, that the house of his father may become a school, from which the young man may offer himself for examination; and it is particularly necessary,

* The Faculty of Medicine of Paris, is perhaps the only one where this custom is adopted. The sons of the Doctors of the Faculty, are admitted to the probationary examination, without being obliged to attend classes; and they are exempted from part of the examination for licentiate.

necessary, that the education of colleges should not be exclusive ; and that candidates educated by private teachers, should be admitted to the public examinations. It is equitable, that active minds should not be forced to pursue, with painful precision, the same route with the most sluggish genius ; and that each may freely make the most of his natural talents. These requisites could not be accomplished, if the duration of studies were determined by regulations. On such occasions, advice, and not orders, ought to be given. No period of study should be prescribed ; no particular professors ought to be pointed out : let it merely be agreed, that, with respect to minds of an ordinary stamp, six years will not be too much for the purpose of studying Medicine in its full extent ; that, with respect to the medical studies, they should be divided, as the branches of instruction, into Theoretical and Practical ; and it must be remembered, that the Theoretical sciences are divided into the Preliminary ones, and those which are immediately necessary. It may be added, that the Theoretical sciences, which are immediately necessary, ought not to be studied till after the Preliminary ones.

are perfectly understood ; that towards the end of the second year, it will be proper to conjoin the study of both, which will stamp an additional value on the Preliminary sciences ; and that on the third year, the pupils may attend the Clinical wards, which they should not leave till towards the end of the sixth year.

These hints will be sufficient for those who have considered attentively the table which has been given.

As the students of medicine ought to have full liberty in the choice of their preceptors, and in the order and duration of their studies ; and as restrictions of every kind are unjust, since it is the knowledge, and not the time spent in acquiring it, of which a judgement ought to be formed, the students shall not be obliged to produce any certificates of study, in order to be admitted to examinations which ought to be open to every one : the strictness of the examinations should alone be sufficient to keep ignorance and dullness at a distance.

The examinations on the Theory and Practice, shall take place at the end of the session, the one immediately after the other ; for it is proper, that the man who possesses a sufficient degree

degree of knowledge, may proceed from the one to the other, and may acquire, without any obstacle, the title of Physician if he shall merit it.

With these views, as all the branches of Medical instruction, shall every year be concluded about the 10th of September, the first examination on Theory may be begun on the 12th, and the second on the 26th of the same month. The examination on the Practice of Physic, may be commenced on the 8th of October, after which there shall be a short vacation; and the session may again commence about the 10th of November.

§ VII. *Of the Examination of Students.*

Of Examinations in general, and of Medical Theses.

EXAMINATIONS, as they are conducted in the present Colleges, are insufficient to attain the proposed end. They are carried on in Latin; and, if ever ignorance can be concealed under the veil of fluent eloquence, it must be chiefly in that language. As the students are examined *viva voce*, those who, from want

of the habit of speaking, or from timidity, are embarrassed, may be hence completely prevented from success. The public is not admitted to the examinations; and therefore, it is allowable to conclude, that these are merely formal ceremonies: and, in short, the questions are proposed by the judges at will, and hence their impartiality may be doubted.

In several Faculties of medicine, all the fellows have a right to put questions, and they do so in effect; therefore, these questions are without method, are quite unconnected, and are devoid of general principles; and therefore, in these examinations, every thing depends on chance.

None of these inconveniences should exist, in the new order of affairs which ought to be established.

In some of the universities of Germany, questions are proposed in writing; and the students are required to bring, next day, written answers. It will be readily seen how easily they may procure assistance on such occasions.

The same observations are applicable to the theses, and the kind of argumentation to which

which they lead. The former may be the work of another, and the latter may have been suggested : hence all that ceremony affords no proof of the candidate's abilities. Without entirely exploding theses, which ought by no means to be included in the number of legal and necessary proofs, the students may be invited to compose dissertations on various subjects of contemplation, of practice, or of enquiry, which they may have particularly investigated : these subjects might be pointed out by the professors themselves, to such students as shall have shewn the greatest industry and ability. These dissertations should be presented to the college and the public. At the end of each examination, the students should exhibit their views, and their principal conclusions, in a concise discourse. This plan, while it excludes all argumentation, may contribute materially to the improvement of the healing art.

Of the Examination of Students in particular.

THE examination of students ought to be conducted in a different manner from that of

the competitions for professorships, for the following reasons :

1. The students, if consulted on the answers of their companions, might be determined in their decisions by motives of indulgence, which would be very opposite to what the public welfare requires. They are not particularly interested that their fellow students should be well informed ; but it is of material consequence to them, that their professors should be as well acquainted, as possible, with the branches of science which they teach.

2. The art of public speaking is absolutely necessary to professors, but not to students. The difficulty of expressing clearly the ideas by speech, forming frequently a great obstacle to young men, it is proper that their examinations should be carried on by writing.

The students shall be admitted to three examinations, at the end of every year, on fixed days ; the two first of which shall be on the Theory of Medicine, and the latter on the Practice of Physic.

The following regulations are proposed for the examinations :

First

Of the First Theoretical Examination on the Preliminary or Introductory Sciences of Medicine.

1. THE first examination on the Theory of Medicine, shall include the Preliminary Sciences *.

2. This examination shall be continued for three days.

During the first day, the candidates shall be questioned on Anatomy and Physiology †; during the second, on Chemistry as it is connected with Medicine, and on Pharmacy; and, during the third day, on Materia Medica.

3. On each day, four questions shall be put to each candidate.

4. During the days preceding the examinations, the professors shall meet, and shall arrange the questions to be proposed. The number of these questions shall be equal to that of the candidates, multiplied by four.

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* See Part I. Chap. 2. Sect. I. § 1.

† It is surprising, that in every modern plan for medical study, and in the examinations, Physiology should still be placed very much before Anatomy, as it was two centuries ago. This order is precisely the reverse of what the nature of the subjects require.

They shall be so contrived, as to comprehend the most useful parts of the sciences which form the subject of the examinations. In order that each student may be questioned on the different departments of these sciences, the numbered notes on which the questions for each day shall be written, shall be divided into four parts, each of which shall include a particular subject; and shall be parcelled out among the candidates.

5. For this purpose, the notes forming the first division of the four parts of the first day, shall be put into a vase placed before the president.

The candidates, whom he shall call in the alphabetical order of their names, shall each draw a note, which he shall read aloud. The secretary shall write the name of the candidate on the register where the questions shall have been previously written. The same shall be done with the other three parts; and, on each day, the questions shall be distributed by lot in the same manner.

6. The distribution of the questions shall be made early in the morning. The candidates shall begin to work immediately after,
and

and shall continue employed till the evening. During the whole time, they shall observe the most profound silence; and shall, under no pretext whatever, have any communication with one another. Some trusty persons shall remain in the hall to superintend the candidates; they shall furnish them with the necessary food, and shall accompany them always when they are obliged to leave the hall. Every student who shall speak to any other person than those charged to superintend him, shall be excluded from the examination; and every one who shall be convicted of having procured information on the subject of his question, shall be for ever precluded from the examinations.

7. In the evening, at an hour determined by the regulations, the candidates shall be required to deliver their answers to the four questions, written on four different papers, signed by them, and with the numbers corresponding to those of the questions which they shall have received in the morning.

8. It is expected that the answers be written in such a manner that they can be easily read; and that they be compressed into such a form,

form, that only about six minutes may be spent in reading each of them. The answers, as well as the questions, shall be written in the French language.

9. The answers marked by the secretary, shall be delivered, at the end of each meeting, to the president of the College. They shall be examined, without delay, by a particular committee of the professors, who shall give, in writing, a judgement, with their reasons on these different answers. The three medical censors chosen by the electoral body, already mentioned, and one of the members of the directory, department, or district, shall be joined in the committee with the examining professors.

10. One or more days shall be set apart for reading publicly the answers of the candidates, and the judgements of the professors.

11. Each candidate, after having read his answers, or heard them read, shall answer two questions *viva voce*. These questions shall have been previously settled by the professors, and drawn by lot in the manner already mentioned. The intention of this regulation, is to afford each candidate an opportunity of displaying

displaying his abilities to the greatest advantage, and of shewing that he is capable of speaking publicly, if he should fortunately possess that talent.

12. The professors being thus made acquainted with the merit of the candidates, in every respect, shall pass, on each, a definitive judgment; in consequence of which, they shall be admitted, or rejected.

13. The days for reading the answers and judgments, shall be at as short a distance as possible, from those allotted for the work of the candidates. Three members of the directory shall attend at the decision.

14. The public, for whom the common hall should always be open during examinations, shall be particularly invited, by an advertisement written in the French language, to these latter meetings, which ought to be held with great solemnity.

15. The candidates shall be entitled to demand from the president, a copy of their answers, and the decisions on them.

The examinations, on these principles, being conducted with precision and impartiality, will deserve a degree of confidence which the present mode of examining cannot inspire.

Of

*Of the Second Theoretical Examination on the
immediately necessary Medical Sciences.*

1. The medical sciences immediately necessary *, shall form the subject of this examination; which shall, like the former, be continued for three days.

2. On the first day, the questions shall relate to Hygiene, or the general means of preserving health; on the second day, they shall relate to Pathology; and on the third day, to Nosology and Therapeutics.

3. On each day, four questions in writing shall be proposed to each candidate; and, in every respect, the same method shall be pursued, as in the first examination.

*Of the Third Examination on the Practice of
Medicine.*

1. The Medical treatment of diseases, and Clinical Medicine and Surgery, shall form the subject of this last examination, which shall be continued for nine days.

2. On

* See § I.

2. On the first day, the questions shall relate to diseases of the Bones, and to the chirurgical operations which their treatment requires.

On the second day, they shall relate to diseases of the Head, Neck, and Thorax, the treatment of which requires chirurgical assistance.

On the third, they shall respect the chirurgical diseases of the Abdomen, and of the Extremities, and the art of Midwifery.

On the fourth day, Acute diseases shall form the subject of examination.

On the fifth day, the questions shall relate to Chronic diseases.

3. On each of these days, four questions shall be put to each candidate, who shall be required to answer the first *viva voce*, and the other three in writing: in other respects, the same method shall be adopted, as in the first examination. Hence, at the beginning of each meeting, the distribution of questions shall be settled; the verbal answers shall be next required; and the rest of the day shall be allotted to writing the other answers.

4. The sixth, seventh, eighth, and ninth days of the examination on the Practice of
Phyfic,

Physic, shall be spent in the Clinical wards, in the following manner :

The examination shall be made on the sixth day, in the Anatomical Theatre of the Clinical Hospital. The manner of performing chyrurgical operations, shall form the subject of it. Each candidate shall there perform three operations on the dead body. The questions on these subjects, shall be prepared and distributed by lot, according to the principles established for the first examination. On this occasion, each examiner should take a note of the manner in which the candidate shall have operated ; and on this day, they should only attend to the manual part of the operations.

On the seventh day, there shall be distributed to each of the candidates, six numbers, corresponding to the same number of patients in the Clinical wards, allotted to Chyrurgical diseases. The professors shall have previously examined these patients, and ascertained their diseases. The candidates shall be brought to visit the patients, and shall be allowed to take with them, all the notes for which they may have occasion. After having questioned the patients, they shall be led by the professors, into a hall of the hospital ; where, without
conversing

converſing with each other, they ſhall write upon fix different pieces of paper, in a few words, their opinion on the nature, the ſtage, and treatment of the diſeaſes, which they had obſerved. Theſe obſervations ſhall be ſigned, and delivered to the preſident, according to the regulations already eſtabliſhed in the firſt examination.

On the eighth day, the ſame method ſhall be purſued, with regard to Acute diſeaſes.

On the ninth, or laſt day, the ſame plan ſhall be adopted, with reſpect to Chronic diſeaſes.

All the opinions of the candidates, ſhall be delivered to the preſident, as already mentioned, as well as the answers to the questions propoſed, during the firſt ſeven days. All theſe answers ſhall be read in a ſpecial committee of the profeſſors, who ſhall paſs judgment on them in writing, with their reaſons. That committee ſhall meet in preſence of the three medical cenſors, and one member of the directory, department, or diſtrict.

5. One or more days, the leaſt diſtant from thoſe employed in the examinations, ſhall be ſet apart, for reading, publicly, the answers of the candidates, with the deciſions of the profeſſors ;

professors ; by which, the former will be either admitted or rejected.

6. This ceremony shall be as solemn as possible ; several members of the directory shall attend it ; and all the gentlemen of the profession shall be invited to it.

7. At the end of the meeting, the successful candidates shall be proclaimed Physicians, after having taken the civic oath.

8. The candidates shall be entitled, as in the other examinations, to demand from the president of the college, a copy of their answers, and of the decisions on them.

9. The certificates which shall attest the admission of the candidates to the degree of Doctor of Medicine, shall be couched in few words, and in the most simple style ; they shall be in the same form for every candidate.

Reflections on the Choice of the Questions which ought to be proposed to the Students.

THE students who offer themselves for examination, may be divided into two classes, very distinct from each other. The members of the first class, will have received a complete
course

course of instruction in a college; and if they have improved the opportunity, will be capable of answering questions on the whole extent of the art which they will have studied, under every point of view. They are even expected to have acquired a great number of those branches of knowledge, which, without forming part of Medicine, properly so called, connect that science with those which surround it, and afford to him who possesses them, more enlarged ideas, and more extensive means of employing the mind.

Those of the other class, educated in the practical schools of the departments, and whose residence in the places where the medical colleges are established, could not necessarily have been for any length of time, will only have learned what was absolutely necessary; their attention will only have been called to what is really indispensable.

It is not easy to determine the measures which ought to be adopted, for these two different classes. A particular examination for each, would not be proper. As it is wished that the art of Medicine should be considered only in one point of view, so there ought to be only one mode of ascertaining the abilities

of the students of that art. The questions in examinations, should be confined to the branches of knowledge really subservient to the practice of the art. The state ought only to regard practical physicians. They should all, therefore, be considered, or supposed, to have the same degree of capacity; and all, such as they are, ought, in the eyes of the state, to appear equal. Literary fame and honour, are the rewards allotted for physicians distinguished by great talents; and they will obtain these in the academies, and in the acquisition of professorships.

But the more care that the examiners take, to restrain, within proper bounds, the questions by which they will judge of the abilities of the candidates, the better right they will have to be exact, and even severe, in requiring sufficient proofs. It ought to be remarked, that it would be unjust, according to the present mode of teaching medicine, to shew so much rigour in the examinations; for the greatest number of the present examinations, relate only to branches of knowledge, quite foreign to the healing art; subjects, which both the preceptors and pupils equally know to be useless.

From the old mode of teaching, the professors

fors and candidates were, in some measure, equally concerned in the errors resulting from the examinations; for if the latter had not learned, the former had not taught. This circumstance passed unobserved, because the superintendants of public education were also culpable. But, according to this new plan, the mode of instruction being properly established, the State, and professors who shall have fulfilled their duties, will have a right to insist, that the students shall also fulfil theirs.

From these principles, it will be easy to settle the form of the different examinations. It will be sufficient, to follow constantly one simple rule of conduct. Let the professors always ask themselves, in the choice of their questions, if the students properly taught in the practical schools of the departments, ought to be supposed capable of answering them; and in every examination, let them put no question above the reach of the students. They will thus perfectly accomplish the views of those who propose this plan.

By this arrangement of simple questions, always connected with the most essential departments of the healing art, the young men who shall have acquired a great extent of

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knowledge,

knowledge, will always find an opportunity of shewing it; and while the students of the departments will answer in few words, but, in such a manner, as to prove that they have learned every thing which could be reasonably expected from them, they, considering the question under a greater number of points of view, will also shew, that their education has been more complete. By this means, the ambition of the candidates will not be checked, while the public cannot be deceived respecting their abilities.

It may, perhaps, appear, that this mode of examination, so absolutely necessary when two classes of students, very different from each other, are to be examined, will not be less necessary, even when those who have studied the art in its whole extent, are alone the candidates; for it seems proper, that the professors of a science of such vast extent, having always the choice of so many important questions, ought, in every case, to prefer them to those which are less so, and to attend, above every thing, to what is necessary and useful, were it only from respect to motives of humanity.

Continuation

Continuation of Reflections on the Examinations.

As the examinations must be conducted with much precision, there is little doubt, that a great deal of useful information may be acquired at those meetings, in which the reading of the answers of the candidates, is followed by that of the criticisms and decisions of the professors. It will therefore be the interest of all the students, to attend these meetings; which will terminate, in the most useful manner, the courses of the academical Session.

At the end of each examination, the professors shall take a note of those pupils who have answered best; and the various employments of assistants in the museums and laboratories, &c. which, it has been mentioned, ought to be conferred on the students according to their abilities, shall be bestowed on them agreeably to the judgment which the professors shall have formed. These judgments shall be entered on the register, in presence of the three medical censors named by the electoral body, and of two members of the directory, department, or district.

§ VIII. *Of the Distribution of Buildings subservient to the Schools of Medicine, and of the various Employments to be bestowed on Students.*

EACH medical college, must necessarily be annexed to a great hospital.

In whatever situation it may be placed, the college should contain,

1. Two amphitheatres; one of which shall be appropriated to Anatomy, Experiments on Physiology, and Chirurgical operations; and the other, shall be set apart for the lectures on Natural Philosophy, Chemistry, and Pharmacy.

2. Near the Anatomical theatre, one or more Dissecting rooms.

3. One or more apartments for the Preservation of dry and wet Anatomical preparations; in which, may also be placed and preserved, diseased parts; by the examination of which, a proper idea of the morbid changes which the various organs of the human body undergo, may be obtained.

4. A hall or gallery, where all the chirurgical apparatus shall be placed in proper order.

5. Near

5. Near the theatre for Natural Philosophy and Chemistry, a room, where all the machinery and apparatus necessary for teaching these sciences, may be deposited.

6. A museum, or collection of Natural History, comprehending only specimens of every thing useful in the healing art, which the three kingdoms of nature afford. The lectures on Materia Medica, shall be given in that museum.

7. A hall appropriated for lectures, in which, the professor has no occasion to demonstrate. There the lectures on Hygiene, and the Institutions and History of Medicine shall be delivered.

8. A great public hall for the competitions, examinations, for conferring degrees, and, in general, for all the public ceremonies of the college.

9. A library, not too extensive, but well chosen, where the books on Philosophy, Medicine, and Surgery, really useful for the study of these sciences, shall be arranged according to the order of their various subjects. The pupils shall be admitted every day, both into the library, to observe the methodical arrange-

ment of these works, and into studying rooms, where they may consult the different books at leisure.

10. A garden, where the officinal plants shall be cultivated; of which, the professor of Botany, and Materia Medica, shall have the direction. If, in the cities where the medical colleges shall be established, there be already Botanic gardens maintained at the expence of the public, these gardens shall be considered, at least in part, as appendages to the medical college, to which the professors of botany of these gardens, shall be annexed.

11. A number of Clinical wards shall be established in a great hospital; in which shall be received, men, women, children, and aged people, in order that the pupils who shall be instructed in the practice of the healing art, may have an opportunity of seeing the diseases of every age and sex.

12. A laboratory, to be placed in the buildings of the college. There is no apothecary who will not be well pleased to have his shop in that situation. The laboratory shall be served by the students of medicine. The
knowledge.

knowledge of the various medicines, and their preparations, is too little cultivated by young physicians; but this arrangement, will oblige them to attend to these circumstances. This shop will be highly useful, in teaching *Materia Medica* and Pharmacy.

13. In a court, under sheds, and in small apartments, the various living animals shall be kept, for which the professors may have occasion for the purpose of experiments.

14. It would be desirable, that the professors were lodged in the buildings of the college, especially those who may have preparations to make for the illustration of their lectures; such are the professors of Anatomy, Chemistry, Botany, Surgery, and particularly those of Clinical Medicine and Surgery, who ought to have lodgings in the hospitals of which they have the charge.

15. A hall should be appropriated for the records of the college, near which, the secretary should be lodged.

16. The medical students * shall be authorised, and even invited, to assemble in the public

* The students of Medicine and Surgery, taken collectively, are here meant.

lic hall, or in some other one; both for the purpose of repeating the observations of the professors, of attempting various experiments, and for conversing on different medical subjects, in the same manner as the medical students of Edinburgh, who have established, in that city, several societies, very useful for the promotion of public instruction.

The necessary services in the Classes, in the Laboratories, in the various Museums, in the collection of Chirurgical apparatus, in the Library, in the Botanic garden, in the Apothecary's shop, and in the Clinical wards, shall be performed by the students, on whom these various charges shall be bestowed as the rewards of industry, at the conclusion of the several examinations. The duties of the pupils who shall have obtained these charges, shall be, to repeat the observations of the professors, and to explain them to beginners; to register the observations which have been made, and, in one word, to assist the professors to whom the different departments shall be entrusted. These employments shall be so much varied, that every student may find what is most agreeable to his inclinations; consequently, they will

will doubtless become great objects of emulation among the pupils. It will be proper, for the good of the service, that those who perform these duties, should be lodged in the buildings of the college.

These remarks on the different apartments of the college, will enable an intelligent architect, either to form a plan for a new edifice, or, what would be more economical, to model, according to these views, some of the large monasteries, which will be soon evacuated in all the cities of the kingdom.

SECTION II.

Of the Mode of teaching Medicine in the Practical Schools of the Departments, where the country Medical Practitioners ought chiefly to be educated.

ONE of the principal duties of those employed in a reform of the mode of teaching and practising medicine, ought to be, to attend to the wants of the country. Hitherto, there has been no mode of teaching, proper for
this

this purpose; for, on the contrary, every kind of obstacle contributed to retard the progress of those who ought to have attached themselves to this charge. These obstacles were, the establishment of teachers in great cities alone; the distance of several parts of the country from these cities; the great expence attending a residence there; and, above all, the almost absolute insufficiency of the means of instruction.

Several new plans have been proposed, to remedy these errors; but, of these, a careful choice must be made; for some will only add to the evil. The present mode of teaching, is not only faulty from being deficient, as has already been remarked, but also from being too much extended in particular departments; and, in teaching country practitioners, that latter circumstance must be particularly guarded against.

On this occasion, it must be remembered, that the healing art depends on the pure and simple observation of nature; that it originally existed before general philosophy, and quite independent of it; and that it has re-
mained

mained the same, amidst innumerable changes of that science.

It therefore exists singly, and as an island in the middle of the ocean of human knowledge. It is true, that it borders on general philosophy, and undoubtedly depends on it. The preliminary sciences of medicine contribute to approximate them; and the labours of philosophers, anatomists, and chemists, promote daily their union; but, till that shall be properly established, the practice of medicine will be considered by men of abilities, as subjected to an order of laws which are peculiar to itself.

It will not, however, be expected, that by these observations, it is intended to remove philosophy from the studies of medicine. It has already been observed, and it may be again repeated, that the philosophical sciences appear highly proper to improve the healing art; and indeed, it is by means of them that its improvement will be promoted. But the cultivation or teaching of these sciences, is out of the sphere of education which is projected for the country medical practitioners.

It

It will be sufficient if the philosophical discoveries which are really applicable to the practice of medicine, are every year inserted in the compendium destined for the use of such students. By this means, the manner in which these sciences may contribute towards the improvement of that art which is most useful to mankind, will be sufficiently well pointed out.

In the different establishments for teaching medicine * in the country, one or two professors shall be charged with teaching the Institutions. One of these shall teach Anatomy, Physiology, the Theory of Surgery, and the operations on the machine, and on the dead subject. The other shall profess Chemistry, Botany, Materia Medica, and Pharmacy. These courses ought to be very concise. The introductions to the works of Sennertus and Hoffman, may be looked over; they contain as much of the sciences connected with the practice of medicine, as these authors have thought necessary for the description of diseases, and the explanation of symptoms and indications.

These

* It is to be observed, that Surgery is not to be separated from Medicine.

These branches of knowledge are included in a few pages ; and the practical part alone, forms the great bulk of their works. It is for that part, that every thing else ought to be studied ; whereas, hitherto, it has been entirely neglected. It has been considered as a consequence, or corollary of the Theoretical instructions of colleges, which is a capital mistake. It is, in fact, nothing less than that ; for when young men pass from the classes to the bedside of a patient, they find that the greatest number of the principles furnished by theory, are no longer applicable ; and that the connection which was detailed between the Theory and Practice, is not realized.

The laws which nature observes in the diseased state of the human body, it must be allowed, ought to form the basis of those purely practical studies which are here considered ; and if it be judged proper to publish an abridgement of the lectures for the purpose of the projected instructions, the lectures, where these laws of nature are explained, should be first published in this manner. There would result from this plan, a kind of physiology of the human body in a morbid state ; a work
which

which medicine yet wants. It is only within this short time, that this method has been re-introduced. Stahl and Bordeu have returned to that path which had been marked out by Hippocrates. The phænomena of diseases compared with each other, arranged under some principal heads, and classed according to an invariable order, constitute, in their works, the theoretical science or department of the healing art.

The instructions thus projected, can only be taught in hospitals; for it is, in some degree, more by the eyes than by the ears, that students of this kind ought to be instructed. Two professors of Clinical Medicine and Surgery, should, if possible, be appointed in the hospitals; for many inconveniences originate from collecting, about the beds of the sick, great numbers of medical or chirurgical pupils. It will be particularly necessary, that in the elementary works published for the promotion of this branch of public instruction, the parts of Anatomy, Chemistry, and Materia Medica, which have any relation to each species of disease, shall be carefully referred to. The State ought to employ proper persons

sons for the publication of the necessary abridgements of these courses. These elementary works should be addressed to the directories of the departments; and all the members of the profession should be invited to give their opinions, on the additions and corrections of which they may appear to them to be susceptible.

It would undoubtedly be a desirable object, that all those who dedicate themselves to the healing art, should follow the plan of instructions which has been proposed for the medical colleges; but the various species of education necessary for entering on that task, are without reach of the greatest number. They require long study, great expence of living, and great abilities. If the medical assistance necessary in the country, and in the greatest part of cities, depended on such an education of professional men, it would be almost null. While experience and deep thought improve slowly the arts and sciences, the necessity of their being practised, is felt every day, in every place. However imperfect the means which the healing art affords may be, human nature requires them every mo-

ment. It is therefore the instrument, such as it is, improved from year to year, or age to age, that ought to be entrusted to those who know how to use it.

The plan which is proposed for teaching medicine in the country, appears to possess several great advantages.

1. Young men who are not in opulent circumstances, will not be under the necessity of removing to a great distance from their families. In several cities, many will be put to no extraordinary expence; and in country towns, the mode of living is less expensive than in large cities. In short, as has been already said, young men may be educated by the immediate care of their relations, and sons by that of their fathers.

2. It will be easy to admit into the hospitals, students under the title of House Pupils, and to lodge and board them there, without any additional expence, either in the buildings of the hospital, or in its ordinary establishment. There will result from this, a greater facility of instruction; for, in practical sciences, a person cannot become a proficient, unless he be actually engaged in the practice of them. For
this

this reason, the pupils admitted into the hospitals shall have a share of the management of the patients; they shall take care of them, and live among them.

This advantage, already possessed by those who study surgery, should be enjoyed in common by every student of the healing art; as Messrs Chambon and Doublet have proposed, in Memoirs on that subject, which they read to the Society of Medicine.

3. Another very important advantage of this plan, will be, to form persons for the charges of teaching: this will afford an opportunity for the cultivation of genius which has never yet been held out. As the professorships of the great colleges must be bestowed by competition, it is in some measure necessary to prepare persons who may appear on such occasions with eclat: the want of such opportunities is perhaps the real cause of the small degree of splendour of the present practical lectures.

It ought not to be objected, that in the country or in provincial towns, persons capable of fulfilling such duties, would not be found. The Society of Medicine knows

many who would do so with great success. Besides the learned professors who constitute the medical college of Montpellier, the following gentlemen may be enumerated, viz. M. Durande at Dijon, Messrs Razoux and Baumes at Nîmes, Messrs Chibourg and Le Canut at Caen, M. Le Pecq at Rouen, M. Bonté at Coutance, M. Baraillon at Moulins, M. Rougnon at Besançon, M. Jadilot at Nancy, M. Boucher at Lille, M. Dumont at Valence, M. Barberet at Toulon, Messrs Elie de la Poterie and Sabatier at Brest, M. Mahon at Chartres, M. Raft at Lyons, M. Bagot at St Brieux, &c. Besides these, there are many others; for the above are cited accidentally from among the correspondents of the Society: for example, the celebrated Quesnay, was found in obscurity at Mantes.

It may be added, that this custom is nearly followed in England; where there are teaching, operation, and dissecting rooms, in every hospital. Even at Paris, there is a noble provision for instruction in Surgery at the Hotel Dieu, and the same also at Rouen.

Perhaps it might be proper, and it is a project on which the opinion of professional people is requested, that within the great circle of
instruction,

instruction, there might be included the same course of education (in a more compressed form) as that which has been sketched out for the country towns. If this were the case, this course, being intrusted to people of greater abilities than those in the country, might be better cultivated. It would be an object of emulation. It would become a model for the courses of the same kind, which ought to be instituted in the best formed hospitals of the departments. Besides, as this mode of teaching is certainly the most useful of any to the State, it would be improper to neglect any method of perfecting it. One or two additional professors charged with teaching the Institutes, that is to say, the theory of medicine, would be all the extra expence incurred in accomplishing this purpose. It may even be added, that the professors to whom the lectures on Hygieine, and on the Institutes, in the plan for teaching in the colleges, have been assigned, may be charged with this duty *. With

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* In this case, which is perhaps the most simple plan, these two professors will be charged with the duty of teaching doubly, viz. their parts of the extensive plan of the Medical college, and the abridged or practical courses of this plan.

the professors of the Practice of Medicine and Surgery, they may execute within the colleges the same plan which has been proposed for country towns. With the same views, the regulation respecting the mode of teaching in the colleges, that every professor shall, at the end of his course, give a summary view of his whole doctrine, was already suggested.

These arrangements would produce the following advantages. By exhibiting, apart, a summary of the whole course, the professors will not find so much restraint necessary in their great courses, as they must otherwise do; for, without this precaution, they would be always stoppt, from the dread of allowing themselves to enter into too extensive discussions.

The mode of publicly teaching medicine *, may therefore be arranged in the following manner:

I. There shall be five great medical colleges, which shall, as has already been said, comprehend the whole extent of the kingdom. These colleges shall confer degrees; they shall undertake

* Surgery, it is always understood, is included under Medicine.

undertake the great course of instruction; and also the more limited and practical course which has been described.

2. In the great hospitals of the several departments, public teaching on a smaller scale shall be allowed. It will be sufficient to induce the students to attend such lectures, to make the pupils admissible to degrees in the colleges, by shewing themselves qualified. There shall be room in these hospitals for lodging a certain number of pupils, to whom the physicians and surgeons of these hospitals shall deliver various courses of lectures. For this purpose, it will be sufficient to allow an annual addition to the salaries which these physicians and surgeons already enjoy. They may also receive a small fee from some of the students who shall be lodged and boarded in the hospital. Besides, each department may allot an annual sum for the encouragement of these particular courses.

It may be observed, on this occasion, that, in general, in the country towns, there is no want of hospitals for teaching; for, on the contrary, it is teaching which is required for the hospitals. In almost all the hospitals,

there are places for students; the medical practitioners are paid for their services; there is an apothecary's shop, a botanic garden; and there are convenient opportunities for studying anatomy, performing chirurgical operations on the dead body, and for acquiring information by the dissection of morbid bodies. All these opportunities may be improved, by wishing to do so.

By allowing a medical practitioner * for each canton for the care of the poor alone, eighty-one would be required for each district; and consequently, there would be necessary, for the whole kingdom, more than six thousand, exclusive of the medical practitioners of the towns. It will therefore be necessary, that each department possess, in one of the hospitals within its territory, a school for teaching the Practice of Medicine according to the plan sketched out.

The duties of teaching shall be divided between the physician and surgeon of the hospital. The apothecary also shall have a share; for
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* That is to say, a physician or surgeon. In the new plan, these two names are no longer distinguished.

he shall exhibit the elementary operations of chemistry, and the preparations of medicine.

Every year, the Institutes of medicine shall be repeated, viz. Anatomy, Physiology, and Chemistry, in Winter; and Botany, Materia Medica, and Pharmacy, in Summer. Surgery, Midwifery, and the Treatment of Diseases, shall form the practical courses. The care of the anatomical museum, and of the laboratories for chemistry and pharmacy, shall be consigned to the charge of the pupils, to whom some lectures should also be given, on the methods of drawing up cases, on Inoculation, and on Veterinary Medicine.

The pupils shall pass from these practical schools of medicine and surgery, to the colleges. It will be necessary, that, in the hospitals appropriated for teaching the practical departments of the colleges, there should be an annual competition for places, where the most deserving pupils, from every part of the kingdom, should be admitted, that they may reside for a certain period in these hospitals, to perfect themselves. Each department, for a moderate contribution, might have a certain number of places or burfaries in these; an arrangement

arrangement which might be easily made, since each college has a determinate number of departments within its jurisdiction. Thus, the opportunities for instruction, might be extended at little expence, and the number of useful physicians will be proportioned to the assistance which the poor of each canton may require.

PART SECOND.

*Of the Practice of Medicine as it is connected
with the public Salubrity.*

C H A P. I.

Of the Manner in which the Physicians and Surgeons ought to be distributed, in order to assist the People of the Country and of the Cities.

It is principally for the purpose of taking care of the indigent sick, and for superintending the treatment of epidemic diseases, that the physicians and surgeons ought to be dispersed over the several parts of the country. The pupils educated in the practical schools
already

already mentioned, ought to belong, in some measure, to the departments. They will have been maintained and instructed gratis, in the provincial hospitals; and on the supposition that they had been enabled to reside, during a year or eighteen months, in the Clinical schools of the colleges, they will be under a new obligation, and the departments will have an additional right to claim their entire disposal.

These physicians and surgeons should be settled in different parts of the country, according to the wants of each department.

This arrangement must be made in an accurate manner, by adopting the following principles.

Each department being eighteen leagues by eighteen, (which forms 324 square leagues), will comprehend a space of country of nine leagues diameter. The principal place being supposed in the centre of each department, can therefore watch over all the territory.

Each department ought to be divided into nine districts, each measuring six leagues by six, or thirty-six square leagues.

Each district should be subdivided into nine cantons, each of four leagues square.

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This latter division, should form the basis by which the appointment of the physicians for the people in the country ought to be determined.

A physician or surgeon for each canton, will only have four leagues to travel over; and, supposing him to reside in the centre, will only have a circuit of one league.

If, therefore, all the departments are divided into nine districts, and all the districts into nine cantons, there will be six thousand seven hundred and twenty-three cantons; and the number of municipalities or parishes, being from forty, to forty-two thousand, there will be nearly six parishes to each canton.

Supposing the cantons to be less numerous by one third, and not to exceed four thousand, there will be nine or ten parishes to each.

Therefore, the population of the kingdom, amounting to between twenty-two and twenty-four millions of people, there will be about 250,000 in each department, 30,000 in each district, and from 2 to 3,000 in every canton; and allowing one third of the inhabitants of the kingdom to reside in the cities, there will be in every country canton, about 2,000 individuals.

duals. Supposing one sick person for every thirty, according to the calculation made in armies, there may be in every canton, daily, from fifty to one hundred sick persons, or invalids; by which, allowing, as in England, the proportion of indigent, to be one twentieth of the population of France, the physicians or surgeons entrusted with the care of the poor, will only have to visit in each canton, daily, three or four patients of that class; so that there will remain a sufficient number of people in good circumstances, to afford occupation to the medical practitioner.

Thus, each canton will form a convenient circle, both with respect to its extent, and to the number of sick within it. By settling, in each canton, therefore, a physician or surgeon, he may be very usefully employed; for he should practise medicine, surgery, and midwifery; he should be required to undertake pharmacy, perhaps, even the veterinary art, inoculation, and the superintendence of foundlings, and of children at nurse; and he shall also keep a regular account of every thing relating to these. The State should pay him for the charge of the poor. The officers of health shall be subjected to the principal place of each district.

district. At each city of the district, where there shall be a directory of the second order, a physician may be settled, to be employed in cases of necessity. He will act intermediately between the directory of the district, and the established physicians of the country. At the distance of every six leagues, one physician will be sufficient for cases of dangerous epidemics. The directory of each department, shall form, by the union of the physicians of the city, a council of health, corresponding nearly with the nature of the present medical colleges, which shall superintend the administration of assistance in epidemics, and the means to be adopted for preserving health in unwholesome situations, and shall take care to replace, when necessary, the established physicians of the cantons.

Every thing relating to medicine, shall be reported to the departments, each of them being charged with the management of its own territory. But they ought all to have a common centre, where there shall be a medical academy, to which both the administrative bodies themselves, and the different physicians or surgeons, may apply for advice on particular

lar cases ; and also the councils of health of the different departments, who ought to have a regular connected correspondence with the academy.

With respect to cities, the care of the indigent in them, should not be a less important object. In small towns, there may only be one established physician. This office may be united with that of physician to the hospital, to diminish the expence. This latter will be already paid ; the apothecary's shop of the hospital will be very useful ; the pupils will take charge of the sick ; and the overseers and nurses of the hospitals will wait on them. In large cities, there ought to be several pensioned physicians. Besides, it is very probable, that, in large cities, hospitals will be established in each quarter ; in which case, the physician of the hospital shall also have charge of the indigent sick of the quarter. The funds for these establishments, may be furnished from those allotted for hospitals, by increasing these latter somewhat. It would, in fact, be attended with no advantage, if the care of the indigent poor should, in cities, be distinct from that of hospitals. The one
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is a natural consequence of the other. Besides, there would be many advantages, if the greatest number possible, of the poor, were attended in their own houses. By this means, the advantages of the parish charities, would be combined with those of hospitals; a plan, at present under trial in Spain. By this plan, the fatal errors in the management, and the expensive abuses in the maintenance of great hospitals, would be remedied.

In this manner, the health of the people will be watched over in cities, by the pensioned physicians of the quarters; and in the country, by those of the cantons.

Thus, benevolence will be exerted with activity; the supplications of the poor will not be waited for, but their wants and wishes will be anticipated. This could not be accomplished by the various means which have hitherto been proposed, among the rest, by gratuitous consultations in the principal places of the departments. The poor, in general, pay little attention to advice; it is assistance which they require: and, in order to distribute that properly through the various parts of the country,

try, means for affording it must be diffused through them.

The directories of the departments will have the principal charge of this duty. The necessary information respecting the ordinary and accidental wants of the people; shall pass from the directories of the district to those of the departments, near whom there will be a council of health; while, at the same time, the requisite assistance will be conveyed from the directories of the departments to the cantons, through the medium of the directories of the districts.

The general accounts on these subjects, shall be transmitted by the directories of the departments, to that branch of the executive power which shall have the superintendence of the administrative assemblies of the kingdom. The medical academy, already mentioned, shall receive, for promoting the improvement of the science, the result of the correspondence of the physicians entrusted with the charge of superintending the public salubrity, both in the cantons of the country, and the hospitals and quarters of the cities. This shall be transmitted to them, either directly, or through

the medium of the councils of health of the departments.

It will, therefore, be evident, that the physician of the canton, if he require advice in the treatment of any epidemic, or popular disease, will receive it from the physician of the district, who, on the first notice, ought to meet with him; that in cases where both these physicians may have some doubts, they ought to consult the council of health, established in the chief town of the department; and that both the physicians and the council of health, may apply, on such occasions, to the medical academy placed in the capital. All these physicians, the councils of health of the different departments, and the medical academy situated in the centre, will maintain a continued correspondence, and will be in a constant state of activity, which should never be interrupted; and thus, the means of assistance will be numerous and expeditious, as they ought to be, when the health of the people is concerned; for, towards the comfort and prosperity of the people, every thing should be directed.

C H A P. II.

Of the Manner of supplying the indigent Inhabitants of the Country with Medicines.

THE administrative body shall defray the expence of the medicines necessary for the poor. The simple drugs shall be chosen, and purchased directly from the merchants who deal in them by wholesale. The medicines which are difficultly prepared, shall be received from a laboratory, where they shall have been prepared publicly in great quantity, as will be mentioned in a subsequent part of this plan. They shall be put up and sold in boxes, of which, the appearance shall be well known. The Procureur-Syndic, shall cause these medicines to be supplied, in proportion as they are required. It would not be proper, that the physician or surgeon employed in the charge of the public salubrity, should in any case himself sell the medicines which he prescribes. Even although he might not deserve any blame, yet he would not fail, occasionally,

to receive it, should he sell medicines; and therefore, it is of consequence, that he be without reach of such suspicions.

The administrative bodies shall transmit, every year, or every six months, to the physicians of the cantons, a list of the indigent people who shall have a right to their gratuitous care, and to all the assistance which they can afford.

There is a very simple method to oblige the apothecaries to keep in their shops, none but good medicines; which is, to furnish them at prime cost, with the chemical preparations, and the drugs most generally and usefully employed in the treatment of diseases. The administrative bodies may lay out the original expence, which will be afterwards reimbursed to them. By this means, the apothecaries will have no excuse to offer, if medicines of a bad quality, are found in their shops.

C H A P. III.

Of the Establishment of Midwives in the Country.

IT would, undoubtedly, be very desirable, that the practice of midwifery, were exclusively
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ly confined to the surgeons of the cantons. But, since it is probable, that the prejudices in favour of midwives, will continue still to prevail for a long time, it is necessary to endeavour to educate, for that purpose, women, who may be able to fulfil the duties of their profession.

The great difficulty is, to find a good school for instructing them. If it should be necessary to send them, for this purpose, out of the departments, it would not be easy to persuade them to submit to this; and the expenses of travelling, would be too much for them. Each department must therefore adopt the most certain means, for having, in its principal city, a surgeon of eminence, who shall be well acquainted with the practice of midwifery *. This necessary measure, without which the whole would be useless, being adopted, the midwives should be admitted into a lying-in hospital, where they ought to be

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lodged

* If it should happen, that any department should not have a surgeon acquainted with the practice of midwifery, the midwives must be sent to be taught at the nearest department, where there shall be the best informed male practitioner of midwifery.

lodged and boarded, and where all their expences should be defrayed. At Rouen, at Lyons, and at the Hotel Dieu of Paris, there are similar institutions, which have been attended with much success. This method appears preferable to the courses of lectures, which Government has sometimes charged different persons to give, in various parts of the country; because, by the means proposed, observation is joined to precept; and it is by seeing real practice, chiefly, that women are made to attend to directions, which the greatest number would neglect, if the professor were to confine himself to simple narrative, without making references to real practice.

The midwives, after having passed a public examination, shall be settled in various parts of the country; but it will not be proper to allow them any fixed salary. The practice of midwifery, in the hands of women, affords only occasional employment, and cannot occupy the whole time of those engaged in it. A certain allowance for each delivery, will be a more oeconomic and just plan. Formerly, in the management of the funds for the poor, the

the midwives were paid at the rate of five shillings for each delivery.

A single midwife will be sufficient for every two cantons, if they are moderately peopled; and if two labours should occur at a time, the surgeon of the canton will be ready to assist.

The midwives shall be obliged to call him in to all cases of difficulty. The indigent women, shall be ascertained by a commissary of the administrative body, and shall receive proper assistance, gratis.

C H A P. IV.

Of the Organization of the Hospitals.

S E C T I O N I.

Of the Fundamental Principles of the Organization of the Hospitals.

§ I. *Of the Object of Hospitals; of their Number, and Size.*

THE design of hospitals, is to afford to the indigent sick, the assistance conducive to their

recovery, which they could not procure in their own houses.

When, therefore, the indigent sick can be taken care of in their own houses, they shall be attended there, by the medical practitioners appointed to that duty by the administrative bodies.

But, if the sick cannot be properly treated at home, notice shall be sent to the nearest hospitals ; and they shall be carried thither, under the care of one of the pupils of the hospital, who shall see that they be conducted with attention and safety.

Cases may undoubtedly occur, where the nature of the disease, and the distance from the hospital, may be such, that the sick person cannot be carried so far. It will therefore be necessary to establish, in all the villages of a certain extent, an asylum for the reception of patients of this description, who shall there be attended by the physician of the canton, as if they were in their own houses.

Each hospital may be reckoned to contain from fifty to sixty beds, which will be determined by the general proportion of population, and the extent of district to which
each

each hospital should be allotted; both in the country and in cities. In the great cities, where a crowd of strangers of all ranks resort, as hospitals proportioned to the original state of population will not be sufficient, there must be large hospitals *. The largest hospitals should contain no greater number of beds than six hundred, both for medical and chyrurgical diseases.

Besides the ordinary hospitals, there shall be particular ones for children, and old people. The marine and military hospitals, and those for the reception of the indigent in the neighbourhood of the principal mineral waters, as at Bourbonne, Barreges, &c. shall be retained, and may be organized in the manner to be afterwards explained.

All the hospitals shall be divided, according to their size, into a greater or smaller number of separate wards. It would be desirable, that there should be no ward containing more than from fifteen to twenty beds, placed at proper distances. With respect to great hospitals, those will be the most healthy, which shall

* The former kind of hospitals are styled, in the original, *hospices*, and the latter, *hospitaux*. Tr.

shall consist of several separate pavilions, according to the proposal of the Academy of Sciences, or like the hospital of Rochefort.

§ II. *Of the Office-Bearers of the Hospitals; of their Functions, and of the Manner of electing them.*

THE various duties of the hospitals shall be fulfilled by the following persons :

1. By physicians and surgeons.
2. By a principal apothecary.
3. By the pupils of the hospital.
4. By keepers.
5. By domestic servants.

I. The physicians and surgeons shall visit the hospital every day, at a certain hour in the morning ; and in the evening, they shall visit, for the second time, those patients whose cases shall require that attention.

A single physician and surgeon, will be sufficient for each ordinary hospital.

No physician or surgeon shall have the charge of more than one hospital.

In the large hospitals, the charge of each physician and surgeon, should not be so great

as to comprehend, at one time, more than eight or ten patients in a dangerous situation, who require particular attention. This number will generally occur nearly in every hundred and fifty beds, including convalescent and chronic cases. Hence, a physician and a surgeon, cannot, in an hospital, each take charge of more than one hundred and fifty patients at a time.

Therefore, there will be required, at least, two physicians and two surgeons, for every hospital containing six hundred beds.

The physicians and surgeons of the hospitals, shall be chosen, as will be afterwards mentioned, by an electoral body.

It may be asked, Whether these physicians and surgeons, when once appointed, shall hold their places for life, or for a certain term of years only ; or whether they may be re-elected after a certain interval *? This important question cannot be investigated on this occasion, and is therefore only suggested. The
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* It might, for example, be determined, that there should be a new election every ten or twelve years.— Perhaps the same measures should be adopted respecting the professors.

two last propositions seem to be preferable to the first: *1st*, Because, by these means no improper person who may have been appointed, will be continued too long in office. *2^{dly}*, Because a physician will thus be prevented from keeping a place, to the duties of which his great age or infirmities may render him inadequate. *3^{dly}*, Because, in this manner, a spirit of emulation will be promoted, by affording a field for a great number of competitors; a circumstance which deserves much attention.

II. The principal apothecary shall have the charge of the laboratory; he shall prepare the medicines allotted for the hospital; he shall teach the pupils, who are under his care, to prepare the medicines by themselves; and he shall frequently be intrusted with the distribution of the necessary assistance in the treatment of popular and epidemic diseases.

III. The pupils of the hospital shall be chosen from among the students who shall have undergone the examinations on the Theory, both of the Preliminary, and the Direct branches of Medicine. They shall be nominated annually by the judges of the examinations, who shall

shall choose those who appear the best informed. The places of the pupils who leave the hospital, shall be filled up in a proportion to be determined by a particular regulation.

The duties of the pupils of the hospital shall be, *1st*, To oversee the wards, to take care that the orders are properly obeyed, and to keep the report books, and the registers of the different cases. *2^{dly}*, To perform the subordinate chirurgical operations. *3^{dly}*, To prepare the medicines under the direction of the principal apothecary. *4^{thly} & 5^{thly}*, To undertake the anatomical and chemical experiments and investigations which shall be recommended to them by the physician or surgeon of the hospital.

There shall be, in all, five classes of hospital pupils, viz. Inspectors of the wards, Surgeons, Apothecaries, Chemists, and Anatomists.

Their number shall be in proportion to the extent of the hospital. The number of inspectors of the wards, in particular, shall be proportioned to that of the divisions under which the patients shall be ranked; and there shall be a pupil of that class for every fifteen

or

or twenty beds. The other classes may be less numerous ; but, in general, in every large hospital, there shall be under each physician and surgeon, a complete establishment of pupils intrusted with these various duties.

They shall be under the immediate inspection of the physicians ; and shall, in every respect, conform themselves to their orders.

IV. The keepers shall be charged with the care of the patients in every thing which regards cleanliness, and the different wants in which they require assistance. They shall perform these duties under the eyes of the pupils who are inspectors of the wards.

Whoever the persons charged with this office may be, whether they be elected and nominated by a board of administration, or whether they may constitute a class of persons of either sex, appointed by the State to these respectable and painful functions ; they ought not, in any manner, to interfere with the duties of the pupils ; and they shall be required to obey what the pupil intrusted with the inspection of each ward, shall prescribe for the good of the patients.

V. The domestic servants shall perform all the duties which do not respect the persons of
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the patients ; and shall only enter the wards, when called there by their respective charges.

§ III. *Of the Administration of Hospitals.*

THE administration, or rather the council of administration of hospitals, is only mentioned on this occasion, for the purpose of suggesting, that it is an object of great importance, that a part of that council should be elected from among the officers of health ; and also, that the physicians and surgeons of the hospitals should form part of the council, and should have a vote in the deliberations ; for there are a great number of circumstances relating to the management of the hospitals, on which they alone can give proper advice.

S E C T I O N II.

General Organization of the Hospitals for the purpose of teaching the Pupils the Practice of Medicine by observation, or the first Method of Clinical Instruction.

ALL the hospitals should be directed towards this great object ; it is even absolutely necessary, that they should all for the future be organized in such a manner as to accomplish it ;
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and it may be remarked, that hitherto none of them has been proper for this purpose.

§ I. *Of the Division of Hospitals for the purposes of Medical Information, and Clinical Instruction.*

THE number of patients is not the only circumstance to be considered in the formation of the principal divisions in an hospital: it is necessary also, as much as possible, to arrange the patients according to their diseases and wants. By this arrangement, it will be easier to afford the necessary assistance, and to exhibit the different medicines to the patients, besides which a great advantage in the study of diseases will also be obtained; for, in these, the comparison of the different phænomena in similar cases, forms the principal and most important foundations of the prognosis.

It is deemed useful, to detail, on this occasion, all the reasons for these divisions; although, at the same time, it is not thought that these can be carried into execution in all places and at all times. It is left to the care of the physician of each hospital, to ascertain those arrangements which may appear to him practicable and expedient.

TABLE

TABLE of the CLINICAL DIVISIONS, which may, according to circumstances, be established in Hospitals.

ORDINARY HOSPITALS.

First General Division. Part of the Hospital allotted to Men.

Part of the Hospital allotted to Women.

Second General Division. Internal Diseases, or those, the treatment of which consists chiefly in the exhibition of internal remedies.

Chirurgical Diseases, or those, the cure of which depends principally on a chirurgical operation.

I. DIVISIONS FOR INTERNAL DISEASES.

First General Division. Contagious Diseases.¹
Diseases not Contagious.

Second General Division. Acute Diseases.
Chronic Diseases.

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Supple-

¹ It would be desirable that the Contagious diseases were separated from each other.

*Supplement to the Division of Acute Diseases.*² —

Ward for Patients on their admission.

Ward for Delirious Patients.

Third General Division. Uncommon Diseases, or those which require a particular mode of treatment, or on which it is proposed to make experiments.³

Fourth

² The stage preceding that which distinguishes the disease, is sometimes a very interesting subject of study to the pupils, and of reflections to the physician. It is often attended with equivocal symptoms, which sometimes resemble each other in appearance, in cases which, during the rest of their course, are very different. It is by the comparison of these states that the physician can learn to establish a certain diagnosis. It is therefore useful, that patients should not be put into the ward for acute diseases, without having been previously placed in one consisting of a small number of beds, called the ward for those newly admitted. It is also useful, that near the ward for acute diseases, there should be a small one, into which those patients, who, by their delirium, would disturb the others, may be carried. This separation from the others, frequently advantageous for the patient himself, will afford, to the attentive observer, farther objects of comparison, which may be of importance for establishing the prognosis.

³ These diseases belong especially to the class of Chronic complaints. Such are those commonly called diseases of the Lymphatic

Fourth General Division. Venereal Complaints. 4

Fifth General Division. Diseases of Artists. 5

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Sixth

Lymphatic system, and particularly Scrophula: Such are also those which affect the substance of the bones; some of those which affect the cellular substance, and, in general, the obstinate cutaneous eruptions; madness and melancholy; external and internal schirrhous and cancerous tumours; scurvy, &c. All these diseases, and several others, ought to become the object of very particular investigation, both with respect to the study of their varieties, and the symptoms attending these varieties, and the examination of the effects of the different remedies which appear to produce any changes on these disorders; and also, to the chemical analysis of the changed fluids, or even organs which form the seat of these complaints. If possible, each species of these diseases ought to be kept separate from the others; but Maniacal affections, Epileptic and Convulsive disorders, Gangrenous and Pforic eruptions, and the Scurvy, must be absolutely separated.

4 It is an object of importance to continue the undertaking of M. De Horne respecting these diseases, for comparing the different modes of cure, and for ascertaining the circumstances in which one mode is preferable to another.

5 It is highly necessary to collect a connected chain of observations on these diseases. Another method to accomplish this, would be, by the establishment of hospitals in the vicinity of great manufactories. By this plan, a knowledge of means for preventing the complaints which affect an useful class of citizens, would be obtained. The Society of Medicine has already attended to this subject, and has collected a great many valuable materials; the greatest part of which, it owes to a very respectable citizen, who is not a medical practitioner, M. Pajot de Charmes.

Sixth General Division
for that allotted to
Women. —

Diseases of Women during
 the puerperal state. ⁶

II. DIVISIONS FOR CHIRURGICAL DISEASES. ⁷

First General Division. Wounds, Fractures, and
 Luxations.

Second General Division. Other diseases in which
 Chirurgical operations
 are the chief means of
 cure. ⁸

Third

⁶ It is still necessary to observe these diseases with much attention; and they may afford room for very important investigations. Besides, no species of disorder is more susceptible than they, of being rendered inveterately worse, by the dangerous circumstances which are found combined in great hospitals. When, therefore, women in such cases cannot be received into the small hospitals, nor attended at their own houses, which would certainly be preferable, they ought to be admitted into the large hospitals, and placed in a ward by themselves, separated even from the lying-in women; because there is no state of the body in which putrid and contagious diseases are more readily communicated, or more generally fatal than that.

⁷ It will always be useful to reserve for the large hospitals, those diseases which require important operations, for evident reasons. In the greatest number of small hospitals, therefore, there will be no chirurgical wards, but for the treatment of simple ulcers of both sexes, and for the delivery of pregnant women.

⁸ Such are those requiring the amputation of large limbs,

or

Third General Division. Wounds which assume a bad appearance. ⁹

Fourth General Division. A room for performing operations. ¹⁰

Wards for pregnant Women.

Fifth General Division. Wards for those who have been operated on.

Wards for delivered Women.

Wards for Convalescents. ¹¹

U 3 Hos-

or cases of cancers of the breast, fistulæ ani, herniæ, stone in the bladder, &c.

⁹ The malignancy which ulcers sometimes acquire in hospitals, may become contagious. The precaution of placing such patients by themselves, is as useful for them, as for those from whom they are separated ; a fact which daily observation proves.

¹⁰ It is well known, that it is very necessary for the quiet of the patients, to avoid operations as much as possible in the wards.

The necessity of a particular ward for those who have been operated on, and for women after delivery, is also obvious. They ought to be carried thither immediately after the operation ; because their cure depends on the most perfect quietness, and on their being placed in a healthy situation.

¹¹ The division for Convalescents is here common to patients affected with internal and chirurgical diseases. But it will be necessary to establish a distinction at least in the arrangement of the beds, in order that the physician or surgeon, under whose care the patient had been, may still attend him in his convalescent state.

This

HOSPITALS FOR CHILDREN. ¹²

First General Division. Diseases of early infancy, or of children from birth, till the first set of teeth have appeared.

Diseases of childhood, from the time of the first dentition, till the second is finished.

Boys.

Girls.

Second General Division. Diseases which are Contagious.

Dis-

This stage of diseases, will afford to the students, many opportunities of making important remarks on the progressive return of strength; on false convalescence, on relapses, their causes, proportion, and the distance of their recurrence with respect to the original complaint; on the chronic disorders which follow acute ones, which often form the crisis of the latter; and on a variety of other circumstances which have been little described by authors, and which can only be studied in the great book of nature.

It is therefore necessary, that the medical practitioner should not neglect convalescents, nor omit to call the attention of the students to their cases.

¹² It is necessary to remark here, that the assemblage of a great number of children in one place, is more unfriendly to health,

Diseases which are not
Contagious.

Third General Division. Acute Diseases.

Chronic Diseases.

Fourth General Division

for new-born Children. Venereal Disorders.

Fifth General Division. Chirurgical Diseases.

HOSPITALS FOR OLD PEOPLE.

First General Division. Wards for the Men.

Wards for the Women.

Second General Division. Natural Infirmities.

Accidental Complaints.

Third General Division. Chirurgical Diseases.

The Marine and Army Hospitals, and those which are instituted in the vicinity of the principal mineral waters, &c. may be organized and arranged

U 4

with

health, especially during early infancy, than that of those in any other age or state of life. It proves often an invincible obstacle to the cure of diseases; and hence the observer is liable to be mistaken in his opinions, when the patients are exposed to the influence of causes, in themselves so dangerous and fatal. It will be more advantageous to establish, within the circle of the small hospitals, houses both for the education of healthy children, and for the management of diseased ones; and to place in them the orphans and foundlings who shall be sent there from the places in which they shall have been found.

with respect to the diseases which occur most commonly in them, according to the same principles.

It will be also readily allowed, that it is proper, in each hospital, besides the divisions enumerated, that there should be a room for writing the registers; one for opening dead bodies, and for making anatomical demonstrations; a laboratory for the preparation of medicines, and for chemical investigations; a place for drying plants, and a botanic garden, in which may be cultivated the officinal plants, which the physician of the hospital may wish to prescribe, in particular cases, for the sake of experiments.

§ II. *Of the Duties of the Physicians and Pupils of the Hospitals, considered as they regard Clinical Observation and Instruction.*

THE physician shall visit the patients, as already mentioned. The pupils of the hospital shall mark down in a report-book, every thing which the physician shall remark and prescribe; they shall keep a register of the cases; they shall carry the prescriptions into execution;

execution ; and they shall make the investigations which shall be entrusted to them.

The students will receive instruction, by visiting the patients, and accompanying the physician and pupils, while on their respective duties.

In order to understand all these duties, some idea must be formed, of the manner in which the report and case-books should be managed. Both shall be kept by the pupils who oversee the wards.

There shall be two kinds of registers kept, in different books ; the one shall contain the reports made at the visit ; the other, the register of the cases.

The former shall serve as a guide to the physician in his visits, and to the pupils in the duties which are imposed on them.

Each ward shall have a report-book proper to itself. Each leaf of that book, shall be made to contain the history of a single visit ; and shall be contrived in such a manner, that the report of the visit may be made expeditiously, and exhibited in a perspicuous manner.

For this purpose, it shall be divided into several columns, with printed titles, which shall be filled up in the following manner :

At

At the top of the leaf, shall be put the name of the ward, and the date and number of the visit.

The first column shall contain the number of the bed, and the date of admission of the patient; the date of the attack of the disease, if known; and also that of the reception of the patient into the hospital.

The second column shall contain the name of the disease; that is to say, when it has not yet assumed any decided form, the most remarkable symptoms shall be detailed; such as, for example, the fever, and the pains or the depression which attend the disease. When the complaint is known, the name, merely, shall be marked; and when it shall have changed its appearance, its variations shall be described.

The third column shall contain summary observations on the daily state of the patient. This column shall be a little larger than the others.

On the fourth column, the medicines prescribed for internal use, shall be marked.

On the fifth, the lesser surgical operations.

The

The sixth, shall contain every thing relating to regimen.

The pupils who shall have charge of the registers of each ward, shall extract from this leaf, detached notes, which shall be fixed to the bed of each patient, in order to be seen by those students who shall visit them at any time different from that appropriated to the physician's visit. These notes shall contain what is written in the second and third columns, and what respects the prescriptions and regimen.

The report-book, shall also serve to determine the principal observations which shall be inserted into the case-book.

The case-book shall be allotted for inserting, in a connected order, all the circumstances relating to the case of each patient.

At the top of each page, there shall be the name of the ward, the number of the patient, and description of his disease, such as it shall have been marked in the second column of the correspondent leaf of the report-book.

The case-book shall be divided into columns; the first of which, shall contain the date or number of days of the disease.

In

In the second, shall be written all the symptoms of the disease ; not only those which shall be expressed summarily in the third column of the report-book, but also, those which shall have been observed during the intervals of the public visit, by the pupil who has the chief charge of the ward, and who shall keep the records of the cases. On the same column, shall also be enumerated, observations on the nature of the evacuations ; the result of the chemical investigations which may have been ordered by the physician ; and the anatomical remarks which the opening of dead bodies may suggest.

The third column shall contain the remedies which had been ordered, and their sensible and undoubted effects.

When a patient shall be transported from the ward allotted for those newly admitted, to that appropriated to acute diseases, the pupil who shall have charge of the case-book of the former ward, shall deliver up the leaf which regards that patient, in order that it may be joined with those which shall contain the history of his disease.

The

The leaf filled up in the ward for newly admitted patients, shall contain, in the second column, every thing relating to the preceding state of the patient, and to his age, temperament, and profession; and also, respecting the real or alleged occasional causes of the disease, and all the other articles of information which can be learned with regard to his history.

The pupil who shall keep the registers of the ward of convalescents, shall also remit his leaves to the pupil who shall have kept the register of the ward in which the patient had been treated; and from the union of these leaves, containing a complete history of the disease, a short recapitulation shall be drawn up, which shall close that case.

The pupil charged with the care of the case-book, shall be required to mark, on leaves for that purpose, all the meteorological observations, which shall be collected during the space of time included in the book.

The registers respecting that part of the hospital, allotted for surgical cases, shall be kept on the same plan.

Every year, in the months of January and August, the physician shall close the case-books;
especially

especially of the ward of acute diseases, by including in them, all the complete cases, and transferring those which are still under treatment, to the following case-book.

At the close of the case-book, a table shall be made out, of all the diseases included in it, in order to have a complete view of the vernal and autumnal diseases of the year.

During the public visit, the physician shall be accompanied by the keeper and the pupils of each ward, which he enters.

He shall begin his visit ¹³ at the ward appropriated to those newly admitted, and shall, from thence, pass into that of acute diseases, and then into that for delirious patients; the beds of whom, in the ward for acute diseases, shall be kept empty. If the same physician visit all kinds of diseases, and all classes of patients, he should next go into the ward for chronic cases, and into that for disorders requiring

¹³ It is to be here understood, that, by thus expressing these remarks in a positive manner, it is not meant to prescribe, absolutely, the line of conduct which the physicians should adopt; but merely, to point out every thing according to the plan which, it is believed, is most eligible for the purpose of instruction.

quiring a particular treatment ; then into that of convalescents, in the division allotted for the men ; then into that for the women ; and shall always finish his visit by the ward of contagious diseases.

The public visit shall be conducted in the following manner :

A pupil shall hold the report of the last visit, and shall read, with an audible voice, in the second and third column of that report, the state of the patient at last visit ; or, if he have not yet been visited, he shall read in the same columns of the report-book, relating to that patient, the remarks made respecting his case. Another pupil, holding the case-book, shall read, in the same manner, the remarks which shall have been made on the patient during the interval of the two visits.

The physician shall then examine and question the patient ; and, according to his answers, and his state, shall dictate, in a few words, the summary observations which ought to be written in the report-book : these must always be such as shall determine the indications of cure to be followed.

He

He shall then prescribe the remedies, and the regimen ; and shall, if he finds it necessary, give his orders to the pupils charged with undertaking the several investigations.

After the visit, the physician shall examine the registers. If any patient be dead, he shall point out to the anatomical pupils, the principal circumstances to which they should attend, in opening the body. He shall answer any questions which the pupils may put to him. He shall see that the meteorological observations of the day, be accurate : and if any change in the state of the weather, shall have been followed by an uniform change in several patients of the hospital, he shall mark it down, either at the bottom of the report-books, or on the leaf appropriated for meteorological observations.

After this, each pupil shall go to his respective department.

Those who are entrusted with the preparation of medicines, shall extract from the report-book, a list of the prescriptions, divided into three parts. The first shall contain the prescriptions, which must be immediately prepared ; the second, those which are appointed

ed for the rest of the day ; and the third shall be set apart for the regimen.

The chirurgical pupils shall perform the bleedings, and dress the ulcers; and if there be any, more nice, operation, as extirpations, or the opening of deep abscesses, they shall perform them under the eyes of the surgeon, or one of his principal pupils, who shall attend in the ward when desired, and shall superintend the operation, or do it himself, if necessary.

The pupils who have the charge of overseeing the wards, shall employ themselves in writing the cases. Those who shall have chemical investigations to make, shall work at these; and those who shall be charged with the opening of bodies, shall proceed to that duty, having under their eyes, the history of the disease, which will direct them in their inquiries.

The students who shall have attended the physician in his visit, shall have the liberty of also attending the pupils of the hospital, during the exercise of their different functions.

In order to avoid confusion, and also the constraint which the patients would suffer from a crowd of young men, the students shall

be dispersed through the hospital in such a manner, that each shall have a certain number of patients to attend to; and that each patient shall only be visited by a certain number of students, always under the eyes of the pupil who oversees the ward. Each student shall be furnished with the number of patients to which he shall be obliged to restrict himself.

It will also be necessary, that, in the greatest number of hospitals, except in those allotted for teaching, the number of students allowed to attend the hospitals, be determined according to their extent; and that those only shall enjoy that privilege, who have passed their first examination on Theory.

With respect to surgical diseases, the surgeons shall visit the patients, accompanied by the pupils, in the same manner as has been marked out for the physician.

If any operation be necessary, he shall perform it after the visit.

When any patient shall have been transported from the wards allotted for internal diseases, to the surgical wards, for the purpose of submitting to some important operation,

tion, the physician who shall have attended him in the former, shall be requested to attend in the latter ward, in order to concert with the surgeon, the proper measures to be adopted for the management of the case. The pupils of the wards for internal diseases, shall take care to continue their registers respecting this patient ; and, for that purpose, they shall have access to the registers in the surgical ward, in which his treatment shall be continued.

After the visit, a list of the operations to be performed, shall be extracted from the report-books :

The chief surgeon shall distribute these in the following manner :

1. The lesser operations shall be entrusted to the pupils.

2. In the curative operations, the chief surgeon shall determine what shall be entrusted to them ; but these operations shall always be performed under his eyes. Such are, the opening of abscesses, the taking the dressings from great wounds, &c.

3. With respect to important operations, he shall, when practicable, cause the patients

to be transported, the one after the other, into the amphitheatre allotted for that purpose ; and he shall perform the operations in presence of the pupils, the most experienced of whom shall serve him as assistants ; and if he shall think proper to trust to them any important operation, they shall only operate under his eye.

SECTION III.

Of the particular Organization of the Hospitals allotted for teaching Clinical Medicine and Surgery ; or, of the Second Mode of Clinical Instructions.

IN each medical college, there shall be an hospital allotted for teaching, publicly, Clinical medicine and Surgery. Both these shall be taught in regular courses, by one or two professors, who shall be, at the same time, the physicians and surgeons of the hospital *.

Nevertheless, nothing shall prevent the physicians and surgeons of the other hospitals, of every kind, to lecture also, if they choose it,

* See Note 17. page 329.

it, on the diseases of the patients entrusted to their care. They should even be expressly encouraged to do so, in order to excite emulation by competition, to afford an opportunity for the display of abilities, and to multiply for the pupils, the means of instruction. The success obtained in that character, will be an additional title towards obtaining professorships. It is particularly desirable, that the physicians entrusted with the charge of the Marine and Military hospitals, should be engaged to fulfil these useful functions ; and, for this purpose, it may be proper to give them some particular encouragement.

§ I. *Of the Mode of Teaching Clinical Medicine.*

THE professors of Clinical medicine, shall undertake two different tasks. The one shall relate to the observations made at the bed-side of the patients of the hospital, which will be properly the Clinical course. The other shall consist of regular and complete practical treatises on all the diseases of the body, which will

form a complete course of the Practice of Medicine ¹⁴.

Thus, the physician shall give a clinical lecture in the morning, on some of the cases which shall be seen in the course of the visit of the preceding day; and he shall choose three days in the week, at least, for delivering, at

¹⁴ It must be allowed, that an hospital cannot furnish materials for a complete course of medicine, even during the space of two years. There are diseases, which occur very rarely in ordinary hospitals. Besides, the most common diseases cannot, in hospitals, be offered to the view of the pupils, but in the order in which nature produces them. That order which exhibits diseases, as they are connected with the weather and seasons, must afford a great source of instruction: but as that instruction is dependent on the nature of circumstances, it cannot possibly be complete.

The two courses here proposed, are therefore necessary. They ought to be undertaken by one professor. They should, in fact, be so much connected with each other, that the one may serve, as it were, as a commentary on the other, although they be arranged in a different order; and that the pupils accustomed, by the one, to distinguish and to value the laws of nature in what they have themselves seen, may easily conceive the same circumstances, in diseases which may not have been submitted to their view.

at another hour, the lectures of the complete course.

Both these courses must necessarily be extended to the space of two years ; taking the Acute diseases for the subject of the first year, and the Chronic, for that of the lectures of the second. ¹⁵

If there be two professors in the same hospital, the year which shall be appropriated by the one, to the description of Acute diseases, shall be allotted by the other, to that of Chronic diseases.

The Clinical lecture shall be given immediately after the morning public visit, as has already been mentioned.

X 4

That

¹⁵ The reason of this division, is, that the acute diseases, always more distinctly marked, and exhibiting, in the exertions of nature, a course more easily traced, will be more readily understood by the young pupils, than the chronic diseases ; the general nature of which, being more difficultly ascertained, requires greater experience, and more extensive views. There is also a reason for dedicating the course of a whole year to the acute diseases ; which is, that a complete knowledge of them cannot be obtained, but by the union of the diseases which occur in the Spring and Autumn.

That lecture must not be delivered at the bed-side of the patients; but the professor shall repair, after the visit, to the room appropriated for that purpose. ¹⁶

He shall have marked, during the visit, the patients whom he shall have chosen as subjects of his lectures; and their numbers, accompanied by a note similar to that which is attached to their bed-head, shall be written and suspended in the lecturing-room.

The choice which he shall make of the subjects of the lectures, shall be regulated by the circum-

¹⁶ It cannot be judged expedient, to deliver the clinical lecture entirely at the bed-side of the patient. The advantages which would result from that plan, will be derived from the manner in which the visit is conducted. In fact, the reading of the remarks made on the preceding day; the examination of the patient; the description of the principal symptoms which determine the nature of the disease, which shall be written in the report-book, under the direction of the physician; and the prescriptions which are ordered, will have already formed a short lecture at the bed-side of each patient. The inconvenience of a longer lecture, both to the patient who forms the subject of it, and to the service of the hospital, which would thereby be retarded, are very obvious.

circumstances which shall appear to him the most favourable to the instruction of pupils. 17

That

17 The necessity there is, that the professor should also be the physician of the hospital, will here be particularly understood. It is the only means to give him the power of choosing according to his disposition, and of changing, when he pleases, the subjects of his lectures, without occasioning any confusion in the hospital. In the beginning of the course, while his pupils have not yet much experience, he will undoubtedly seldom set aside incipient diseases, till they have arrived at their last stage : but it will be afterwards sometimes useful to vary the views, in order to multiply the subjects of instruction, and to exhibit to the pupils, sometimes diseases similar in their nature, but different in their seats ; sometimes those similar in their seats, but different in their nature ; and sometimes diseases similar in all respects, but varied by different habits of body, ages, professions, and accidental causes ; by which means, the diagnosis will be displayed in its full extent, and in a perfect manner. He ought also to endeavour to improve his pupils, by comparing diseases, similar in their nature, but different in their degrees and accidental symptoms ; and by exhibiting similar accidents supervening diseases of a different nature, and affording a prognosis corresponding to the circumstances under which they occur. He should also endeavour to shew the different effects of the same causes on different persons, by choosing illustrations, particularly from the wards appropriated to artisans. He could

That lecture may be regulated in the following manner :

The

could not accomplish all this, if he had not the complete management of the hospital. If he propose to exhibit constantly to his pupils, the diseases of the newly admitted patients, and to teach them to distinguish, in the dubious symptoms of an incipient disease, the character which it will afterwards assume : if he wish to make them observe the exertions of nature in those cases where she may safely be trusted ; to calculate the time which will be required to make them value her efforts ; to teach them, by that, to distinguish in other diseases what she can do by herself, and what can be expected from the interference of the means of art ; if it be necessary, to take proper opportunities to shew them an uncommon disease ; in short, when the pupils are somewhat advanced in instruction, if the professor wish to submit to their observation, diseases which require long continued and complicated modes of treatment, for which all the efforts of art must be exerted, or on which he designs to make some particular trials of medicines, he could not accomplish his views, if he had only a small ward containing a few beds, into which he should be obliged to transport his patients on whom he would wish to lecture.

But if, for all these purposes, it be necessary that he should have the disposal of the whole, or a great part of a large hospital : if he make it a rule to exhibit, from time to time, to his pupils, the general state of the hospital,

The lecture shall commence by the history of the patients announced as the subjects of the lecture, which shall be read by the pupil intrusted with the charge of the registers.

After that, the professor shall begin and make what remarks he shall judge proper.

When the diseases shall have terminated, either in a cure, or in death, the complete history of the disease shall be read by the pupil who shall have charge of the case-book. In the event of termination in death, the appearances on dissection shall be detailed, and compared with the symptoms of the disease.

The professor shall make his observations on these cases, and shall frequently introduce the history of similar cases extracted from the best medical works.

If he should think it proper to instruct his pupils by familiar means, he may appoint them successively, and by turns, to collect the
history

pital, that is to say, the state of the diseases which occur there; to make them compare this with the state of the meteorological observations; and to shew them constantly, in the prevailing diseases, the connection of the disorders with the state of the weather; it becomes more particularly necessary that he should have the full command of the whole,

history and treatment of a certain number of patients, and may question them on their cases. ¹⁸ He will thus teach them to observe and to judge, by the most unerring and instructive method.

The professor shall also have the liberty of choosing the plan on which the lectures of the complete course of the Practice of Medicine shall be conducted. ¹⁹

That

¹⁸ This mode of familiar instruction, will appear particularly well adapted to the pupils of the clinical schools of the departments, who will be sent to finish the course of their studies in the hospitals annexed to the medical colleges.

¹⁹ Whatever method he may adopt, it is to be wished that he shall make the pupils acquainted with the principal works of the practitioners, both of those who have written on particular classes of diseases, and of those who have described the diseases of a single organ, or function, or of one class of people.

Such are, the principal works on the Scurvy, on Dysentery, on Intermittent and Slow Nervous fevers; those of Bianchi and Morton on the diseases of the Liver, and on Phthisis; and those of the physicians who have written on the diseases of the Army, Navy, and of Prisons. This method, more consistent with the course of clinical instruction, than that of nosologists, ought not, nevertheless, to prevent the

That course shall, like the clinical one, be divided into two parts ; one of which, appropriated to Acute diseases, shall occupy the space of the first year ; while the other, comprehending Chronic diseases, shall be reserved for the second year.

At the end of the Vernal session in the month of August, and at that of the Autumnal one in the month of January, that is, when the registers of cases shall be closed, the professor, in his clinical course, shall give one or two lectures on the prevailing diseases of the preceding season.

At the same time, he may dedicate some of the lectures of the complete course, for the purpose

the professor from pointing out the best works on that latter subject, however far removed from perfection they may be ; and, in treating of each disease, he ought to assign its proper place in the system of Nosology.

It would be difficult to make the lecture of the complete course correspond always with the clinical lecture ; but the professor should take care, when an occasion offers, to refer to the observations made in the hospital at the bedside of the patient. Thus, the comparison of facts which the pupils shall have witnessed, will render them more sensible to the history of analagous diseases, of which the hospital shall not have afforded any examples.

purpose of exhibiting to the pupils, a view of the Epidemic diseases of different seasons, best described by ancient and modern authors ; and he will undoubtedly pay more particular attention to those which shall be most analogous to the prevailing diseases of the season under consideration. He should also make some observations on Epidemics in general.

Both these courses shall commence in the month of March, at the beginning of the Vernal season ; and at the end of the Autumnal one, both shall be concluded by a nosological recapitulation of what shall have been exhibited to the pupils during the course of the year. That recapitulation shall be made during the interval between January and March ; and the remainder of the time may be considered as the vacation.

§ II. *Of the Mode of Teaching Clinical Surgery.*

THE mode of teaching Clinical Surgery, should be founded on the same principles as that of Clinical Medicine. But it requires an additional exertion, that of the hands.

As

As the teaching of Surgery cannot be properly separated from that of Medicine, and as it is designed for all the students, although undertaken by a particular professor, care must be taken to arrange the hours of visiting and lecturing, in such a manner, that they shall not interfere with those of the professor of Clinical Medicine of the same hospital.

In teaching Clinical Surgery, several distinct subjects must be attended to. *1st*, The internal treatment of Chirurgical diseases. *2d*, The method of dressing Sores, and of applying Bandages. *3d*, The auxiliary or subordinate Chirurgical operations. *4th*, The Important operations. And, *5th*, The Delivery of Pregnant Women.

Clinical Surgery, like Clinical Medicine, shall be taught in two ways; in a Clinical course, and in a regular Complete course, (*de Morbis Chirurgicis*).

There shall also be particular institutions for those subjects which require the use of the hand.

The Clinical course of Surgery, shall relate principally to the internal treatment of Chirurgical

rurgical cases, to the Important operations, and to Midwifery.

The mode of teaching the internal treatment of Chirurgical diseases,²⁰ in the Clinical course, shall be conducted in the same manner as has been pointed out for teaching the treatment of internal diseases.

The important operations shall be performed in presence of the pupils, either in the wards of the hospital, or in the amphitheatre appropriated to that purpose.

Some

²⁰ It is to be wished that all the pupils, even those who mean to dedicate themselves solely to the treatment of internal diseases, should begin, in the Chirurgical class, their Clinical studies; they will there see the same symptoms as in internal diseases, originating however from different causes.

It is equally necessary, that the same students dedicate a part of their attention to the theory and practice of dressing sores, to the application of bandages, and to the auxiliary operations. It will not be difficult to demonstrate the advantages of these acquisitions to those who have observed of how much importance it is, in the practice of the healing art, to seize the favourable moment of performing these operations, and how often the absence of a surgeon has prevented this from being done.

Some of the operations which form the subjects of this course of instruction, may be appointed to be performed on certain days, or even at certain seasons.

For these, the same regulation may be made which M. Default has adopted in the Hotel Dieu of Paris, which is, to allot for them certain days of the week. On the preceding day, the professor shall explain, in a few words, the principles of the operation, to the pupils assembled for that purpose in the amphitheatre; he shall perform it before them on the dead subject, and shall demonstrate to them the parts through which he shall have cut.

After the operation, he shall detail the different periods and causes for performing it, with the difficulties which may occur in operating, by explaining the reasons for all his steps in the operation.

The operations which cannot be delayed, and for which, consequently, no particular day can be fixed, shall be performed also in presence of the pupils, either in the amphitheatre, or in the wards, when it cannot be avoided.

With respect to the Practice of Midwifery, the professor shall deliver women in presence of the pupils likewise ; and, immediately after the delivery, or at any convenient hour, he shall explain the circumstances of the operation, and the difficulties which may have occurred, either on the part of the mother, or child.

He shall take care to teach his pupils the progress of gestation, by submitting to their examination pregnant women, at all the different periods of pregnancy, whom he shall collect for that purpose.

As to the dressing of sores, the application of bandages, and the auxiliary operations, the pupils will easily acquire a knowledge of the mode of performing them, under the direction of the principal pupil of the hospital. He shall first exercise them in the practice of these on the dead subject ; and then he shall make them perform under his eyes, first the dressing of sores, next the application of bandages, and afterwards that of the cautery, setons, and blisters ; and then the opening of abscesses, and the different modes of bleeding.

The

The lectures of the complete course of Chirurgical diseases and operations, shall be delivered, either after the business of the morning, or in the afternoon.

The professor shall explain the principles on which the treatment of Chirurgical diseases, both before and after the several operations, should be conducted ; and he shall point out to the pupils the best works on that subject. He shall exhibit the different methods of operating ; he shall perform the operations himself on the dead subject ; and he shall ascertain, as far as anatomy and experience can enable him to do, what methods are preferable.

He shall pursue the same plan with respect to Midwifery. At the end of each lecture, the pupils shall exercise themselves in the practice of all the different operations on the dead subject, under his eyes, and under the direction of one of the principal assistants, who shall be entrusted with that charge.

The Elementary course of Surgery may be undoubtedly finished within the space of one year. But as every one who attaches himself to the practice of surgery should necessarily possess great dexterity ; and, as this can only

be acquired by much practice, it is incumbent on the pupils, after the first course, still to remain in the hospital, for one or more years, to perfect themselves by serving as assistants.

The professor shall employ, for the care of the patients, those students who have attended a complete course, in preference to others.

The chief surgeon will be able, after the second year, to judge of the abilities of each pupil, and to ascertain the nature of the duties in the hospital with which he may be entrusted.

In this manner, the hospitals will afford to the pupils every opportunity of instruction in the practice, both of medicine and surgery, which the school of nature can furnish; and therefore it is to be presumed, that the young medical practitioners, even after having passed their trials, will still continue to attend them, in order to improve themselves, more and more, in the practice of their profession. ²¹

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²¹ Some have wished, that each practising physician should be accompanied in his visits by a young physician, whom he shall undertake to instruct. But, besides that several physicians would refuse to submit to so much trouble, the greatest number of patients would not consent.

The provinces, the fleets, and the armies, will be furnished, from these institutions, with physicians of abilities, who will be pointed out by the testimony of their preceptors, and the esteem of their fellow students.

C H A P. V.

Of the Duties of Physicians in attending the Hospitals for the Poor, or the Workhouses, and the Prisons.

THESE establishments ought to be provided with every possible assistance respecting health. Humanity, as well as public safety, requires it. Imprisonment should extend no farther than the loss of liberty. Every thing more than the necessary precautions for securing the person of the prisoner, is a violation of the rights of man. In the workhouses and prisons, therefore, every individual ought to

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sent to admit persons with whom they would be unacquainted, and who consequently could not have acquired their confidence. This mode of instruction, cannot therefore become general. The mode of study which may be pursued in the Clinical schools, will compensate for this in the most effectual manner.

be properly attended during this disease. It is well known, that from inattention to cleanliness, and proper care, and from many persons being crowded together, or from the improper treatment of the sick, prisons and charity workhouses have often become the source of the most dangerous and obstinate epidemics. In England, these fatal effects have been particularly felt; there, the most contagious diseases have been communicated from the prisons to the fleets, in consequence of the impress service; from the bridewells to the armies, by means of recruits; to the country and villages, by the county sessions; and to the colonies, by the transportation of criminals.

The precautions respecting the public salubrity, ought therefore, in such places, to be particularly attended to.

The physicians shall be obliged to make out, twice or thrice a week, a list of the patients in the prisons and charity workhouses, and a state of the sick wards which may be established in them.

It is probable, that each department will have an hospital for the reception of beggars, or rather a workhouse; for the name of hospital

pital for beggars, which stigmatizes always in the public opinion the persons lodged in it, ought to be suppressed. These workhouses will depend on the directories of the departments.

With respect to prisons, it is not yet settled to what department of administration they shall belong. But they will certainly be under the superintendence of the municipality.

One of the most essential objects of regard is, to provide the inhabitants of these places properly with linen, without which there can be no cleanliness.

The use of wine is equally indispensable; in order to prevent putrid fevers, and the effects of bad air.

There ought also to be in such houses, large halls for the reception of the prisoners during the day, in order that the bed-rooms may be kept clean, and exposed to the air in the day time.

Lastly, The physicians who shall have the charge of attending these establishments, shall, like those of the hospitals, keep two registers; one of which shall contain medical observations, which they shall communicate to the ad-

ministrative bodies ; and the result of which, at least, shall be sent to the Medical Academy, appointed to correspond with the practitioners on every thing which regards the health of the people, and the improvement of medicine.

PART THIRD.

Of the Medical Police, or Regulations respecting the Practice of Medicine.

CHAP. I.

Of the Practice of Medicine, and of the Mode by which the Duties respecting public Salubrity, shall be adjudged to Physicians.

As every person ought to be at full liberty to trust whom he chooses, so every one should be allowed to consult whom he pleases respecting his health, in the same manner as with regard to every other necessary in life. It will be sufficient, if the law precludes any body from assuming the title of Physician, who has not received it from that power to whom the privilege of confirming degrees shall be entrusted.

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In future, all those whom the five Medical Colleges shall have pronounced qualified, shall be permitted to practise, and teach Medicine and Surgery, throughout the whole extent of the empire.

The apothecaries and midwives, legally passed, shall also be allowed to practise throughout the whole kingdom.

In order to be permitted to practise in a municipality, it will only be necessary for the practitioner to submit to the examination of the municipal body, the certificates of his trials. That body, after having found them genuine, shall cause the name of the practitioner to be added to the list of physicians of the place, who shall be informed of this by letter.

From that date, the newly received physician shall be eligible to all the offices which can be conferred on the practitioners of the place which he inhabits.

There shall be no useless ceremony of adoption into any one of the colleges of medicine, because these colleges shall have no jurisdiction over any of the physicians, who shall be all equal in rank.

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The physicians, surgeons, and apothecaries, shall no longer constitute corporations, as each ought to practise his own particular profession, under the sole protection of the law.

These practitioners shall merely be requested to meet together as often as possible, to converse on every thing which regards the improvement of their profession.

In the chief cities of the departments, they shall form a council of health; the meetings of which may be attended by every medical practitioner residing in the cantons of the jurisdiction, without any of them being obliged to be present on stated days.

The medical practitioners shall assemble, whenever they are desired by the administrative bodies, to deliberate on public affairs, or to make different elections, as shall be afterwards mentioned.

The judges of the competitions for medical professorships, the physicians who ought to be members of the committee of public instruction, already described under the name of Censors of the colleges, and the physicians and surgeons of the hospitals, shall be chosen by an electoral body, formed partly of a certain
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number of electors of the departments, and partly of physicians ; the proportion of whom, shall be fixed by the National Assembly.

For this purpose, all the physicians, either of the jurisdiction of the college, or of the department, according to the nature of the subjects in question, shall be requested to convene, on a stated day, to nominate from among themselves, a sufficient number of electors. ¹

The practitioners who shall hold any office which respects the public salubrity, (except those of the hospitals), in the municipality, cantons, districts, and departments, shall be nominated by ballot, by the different administrative bodies. The same regulation shall be observed, in the election of those physicians who shall be appointed to inspect the apothecaries shops, and the wholesale warehouses of drugs ; of those who shall be entrusted with the care of the poor, and the treatment of
popular

¹ If it regard the election of the judges of a competition, all the physicians of the jurisdiction of the college, shall be convened. If it respect the choice of censors, or of physicians for hospitals, the practitioners of the department alone, shall be assembled. No one shall be forced to attend these meetings.

popular and epidemic diseases; and of the midwives of the cantons.

The members of the courts of justice, shall also name, by ballot, those practitioners who shall be appointed to make reports to them on judicial cases, and who shall be entrusted, as coroners, with the duties of medical jurisprudence.

The reasons which render it proper, that the physicians and surgeons of the hospitals should be chosen by an electoral body, composed of a certain number of electors of the department, and of a certain number of physicians, are the following :

From principles of humanity, and for the purpose of accelerating the improvement of the medical art, it is absolutely necessary, that the best informed physicians and surgeons should have the charge of hospitals. It is in these, in fact, that a physician can employ himself most successfully, in making observations. In the fourth chapter of the second part, a mode of instruction for all the hospitals, has been pointed out ; by means of which, every disease will be described, every case will be collected, and the influence of every season will

will be observed. It is obvious, that all these proposed regulations will be useless, if the offices of physician or surgeon to the hospital, be possessed, not only by men of a superficial education, or of indifferent abilities, but also, even by those who have merely an ordinary degree of knowledge.

It has been thought necessary to propose remitting the power of electing these practitioners, to an electoral body, partly composed of physicians, in order to avoid those inconveniences which so often originated from the improper choice of the managers of hospitals, according to the former system of government, and which are to be very much dreaded.

Some members of the society have wished, perhaps properly, that the election of physicians of the hospitals, should be made by means of a competition on the practice of medicine, ¹ somewhat resembling that which has been proposed for the trial of students. ² It must indeed

¹ This custom is at present adopted, with respect to the surgeons who acquire subordinate offices in the hospitals. Why is it not also observed, in regard to the physicians and surgeons themselves?

² On this occasion, a competition merely practical, is alone meant, such as the third examination of the students;

deed be allowed, that, to ask a physician of character, to submit to an examination, as if his experience were doubted, would have the air of calling in question, what the public opinion has already decided ; but it must also be allowed, that some of the practitioners, in such situations, who have numerous patrons, and who possess the good wishes of respectable people, would either refuse to submit to such competitions, or would fail, if they should forget themselves so far as to run the risk of the trial. It cannot, therefore, appear astonishing, that so much anxiety is entertained, and so many precautions required, in the arrangement of a choice, which is almost always found to depend, even where the most honourable people are concerned, on a great number of circumstances foreign to merit, and which is most frequently determined by prejudice, enthusiasm, a combination of connections, or the mistaken zeal of friends.

C H A P.

dents ; and which should be made in the clinical school ; as has been fully explained, § VII. sect. 1. chap. 2. part 1.

C H A P. II.

Of the Court Physicians.

IF all the physicians and surgeons, whose names are inserted in the court lists, had been only, on a single occasion, called together, to perform in concert their duties, such a collection of persons, unknown to each other, and equally unknown to the princes, would have appeared so incongruous, that a reform would have been spontaneously made. The greatest number of such physicians and surgeons, have only purchased the privileges which they enjoy, for the purpose of screening themselves from the examination to which they must have otherwise submitted, before they could have been allowed to practise in great cities.

But now, the expence of these offices shall be repaid ; and, from this date, the princes will trust those who shall have inspired them with the most confidence, either by their success in practice, or by their writings.

It will be useful, that the same physicians shall attend the princes and their household, who may have charge of the ordinary hospitals ;

tals ; and that they shall also continue the public practice of their profession. By this means, they will retain the knowledge which they have acquired, and they will gain additional information ; and hence, render themselves more worthy of the confidence of the prince.

Van Swieten answered all the consultations which were sent him from abroad ; he, for a long time, visited all the patients who required his attendance ; and he was, at the same time, physician to the whole imperial family at Vienna.

C H A P. III.

Of Medical Jurisprudence.

THE observations on the manner of drawing up reports on judicial questions, and on the duties of a sworn physician or surgeon, written by Paré, Guillemeau, Severin-Pineau, Deveaux, &c. require no recapitulation on this occasion. It is only necessary to point out some circumstances in medical jurisprudence, which ought to be reformed. In these details,
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the judicious views which M. Chauffier, an able surgeon at Dijon, has exhibited in his *Observations chirurgo-legales*, will be chiefly pursued, as they have been deemed proper to be adopted.

It is to be particularly recollected here, that medical and chirurgical jurisprudence are included among those branches of the healing art, which ought to be taught in the medical colleges, and in the practical schools of the departments.

It must also be remembered, that, in the first chapter of this third part, it has been determined, that the physicians * to whom the exercise of medical jurisprudence is entrusted, shall be chosen by ballot, by the members of the courts of justice, which is better than to leave that choice to a single judge. †

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* There is no expression in English, similar to "*Médecins de Barreau*;" and hence the translator has been obliged to use considerable circumlocution on this occasion.

† These places were formerly bought, and were rarely possessed by the best informed persons of the profession. The offices of sworn physician and surgeon, ought therefore to be suppressed.

These two points being settled, the following observations relate to the manner in which judicial reports should be drawn out ; on the necessity of not trusting that duty to a single person ; and on some other precautions, which it is not less requisite to adopt.

It is very difficult to distinguish the truth amidst the numerous falsehoods and exaggerations with which the accounts of those broils and accidents, for which coroners are called in, are commonly charged. This forms one obstacle to the faithful performance of this duty.

It is often no less difficult to determine, whether there be any connection between what preceded these broils or accidents, and what followed : which proves a second obstacle.

When the coroners have not a very accurate idea of the facts which they ought to relate ; when, in their report, they confound doubts with positive assertions, and the consequences with the causes, it is almost impossible that a judge can form a clear opinion of the affair on which he must decide.

It is therefore of importance, as M. Chausfier recommends, that the coroners should pursue one method, and adopt one constant form in all their reports.

1. Every thing which preceded their being called, and which is merely narrative, should be first mentioned. They must be very concise and cautious in this part.

2. The description of the real state of the wounded person, or of the dead body, when they were called, ought to follow next : it is this part which properly constitutes the judicial report. What is seen externally, should be first described ; and then, what is observed internally. The state of the head, neck, chest, belly, pelvis, and extremities, should be successively detailed, if necessary. Nothing but what is evident and undoubted, should be mentioned. The effects of the position of the body, or of putrefaction, must be carefully distinguished from those which might have been produced by the cause which forms the subject of investigation. On such occasions, any thing doubtful, is an insurmountable obstacle to the investigation of truth ; for it may be said, that the judge is then reasoned with, whereas, nothing ought to be laid before him, but what can illustrate the subject in question. Every investigation which does not tend to elucidate the point at issue, is useless, and consequently ought to be rejected.

3. The consequences or deductions, should always be quite separated from the relation of facts ; for these conclusions are the work of the coroner, and he may be mistaken in his reasonings, while it is not to be presumed that he can err in his relation of facts, which is all that is expected or wished for from him.

The fifth section of the decree of the National Assembly, on the reformation of criminal jurisprudence, enacts expressly, that all judicial reports shall be drawn up in presence of two witnesses or assistants, who shall sign them, otherwise they are to be considered null.

This law is applicable to the present subject. The coroner entrusted with making a judicial report, shall be always superintended by two witnesses ; but, in matters of consequence, it will probably be proper to add to these witnesses, who are not professional people, two others, chosen from among the physicians and surgeons. If this plan be adopted, each court of justice shall elect, by ballot, three coroners, one of whom shall be principally employed.

In important cases, therefore, the report shall be drawn up in presence of four witnesses,

ses, and signed by five persons ; for, too many precautions cannot be adopted, where the honour or life of the citizens is at stake.

The coroner thus superintended, cannot refuse to draw up his report on the very spot where he is called to examine ; a circumstance which is highly important for the truth of the report. This rule has been hitherto very seldom observed.

It should also be required, that the report should be lodged in the office of records of the place, within twenty-four hours.

Notwithstanding these different precautions, it is not impossible, that, on some occasions, an improper coroner may be chosen, whose report, founded on erroneous ideas, may be found contradictory to the principles of the art. For this reason, M. Chauffier proposes, that each report should be verified by a board or committee, established for that purpose in the chief places of the department. The object of this examination, should be, to discover if there be any evident contradiction, either in the detail of facts, or in the conclusions deduced from them, which betrays the ignorance or prejudice of the coroner. But, may it not be apprehended, that there shall not be in all

towns of some departments, persons, who are so well informed, that no objection can be started to their judgment? It is evident, that there is some reason for such apprehension.

The verification of reports, would be much more certain, if the magistrates should transmit them to the professors of anatomy and clinical medicine and surgery, of one of the five colleges, who ought undoubtedly to be the best judges of that subject, since they shall have the charge of teaching medical jurisprudence. If, therefore, the verification of reports, which prudence seems to require, is thought necessary, the means now proposed, are perhaps the only ones for that purpose, which can be considered as sufficient in all cases, and which, consequently, ought to be prescribed by law.

M. Chauffier adds, that the judge should order other coroners to examine the circumstances at a second visit, if the reports be not passed by the commissioners appointed to verify them. But, as there must always be some delay in the verification of reports, the circumstances of the case may be changed; and it will often happen, that a second examination

is impossible. On such occasions, the judges will at least avoid a source of much error, by learning, that they cannot confide in the report which has been presented to them; and they will be acquainted with the character of the coroner, who, convicted of ignorance or dishonesty, will necessarily be for the future suspected by them.

C H A P. IV.

Of Pharmacy; or, of the Sale and Preparation of Medicines.

S E C T I O N I.

Of the Persons to whom the Sale and Preparation of Medicines ought to be entrusted.

§ I. *Qualifications which should be required in those who Prepare and Sell Medicines.*

THOSE persons who are entrusted with the sale and preparation of medicines, ought to have a knowledge of natural history, materia medica, and chemistry. ¹

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¹ The art of the apothecary, demands only a part of the knowledge required in a physician; and yet there is

It is therefore necessary, that their abilities should be ascertained by legal proofs.

These proofs ought to consist in examinations on the following subjects: *1st*, The knowledge of simple drugs, of their principal qualities, and of the alterations which may be made on them by different circumstances: *2dly*, The art of preserving them unspoiled: *3dly*, Pharmaceutical chemistry: *4thly*, The art of combining and mixing drugs, for the purpose of making compound medicines.

The examiners shall be physicians and apothecaries, in such number as the National Assembly

no branch of knowledge of the apothecary, of which the physician is not obliged to be possessed. The instruments which the physician employs, owe, in part, their perfection to the apothecary. He performs in the hospitals several very important duties; and many persons of that profession, have rendered useful services to medicine, by teaching, with success, chemistry and pharmacy. Several physicians, celebrated for their knowledge in these two sciences, have been educated at the school of Rouelle. Although, therefore, pharmacy, having no connection with any thing which relates to the knowledge of the human body, ought not to be confounded with medicine; yet it should remain connected to it by strict ties, the existence of which is of importance to the improvement of the healing art, and the interests of mankind.

Assembly may determine. The examinations and receptions, shall take place in presence of the public officers, either in the five medical colleges, or in the practical schools of the departments ; for it might appear too rigorous to ordain, that the apothecaries, like the physicians, should only be passed by the medical colleges.

§ II. *Of the present State of the Public Police, respecting the Sale and Preparation of Medicines.*

IN the present state of affairs, many persons sell, and even prepare medicines, who have not undergone these trials.

The indigenous plants are collected, dried, preserved, and sold by herbarists, very few of whom, even in Paris, have a sufficient knowledge of botany. The roots of the Nightshade, have been known to occasion the most alarming accidents, from having been sold for those of Burdock. A case of this kind was communicated to the Society of Medicine by M. Jussieu. Many herbarists do not even know the method of drying and preserving plants; which is proved, by the condition in
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which they are often found in their possession. They sometimes suspend them in the roofs of their apartments, from which they take them down to be sold, entirely covered with dust; at other times, they keep them in cellars, where they are in a state of incipient putrefaction. They dry them in heaps; and the improper use of stoves changes their qualities still more.

There are a very few careful herbarists only, who can be exempted from these animadversions.

The exotic simples are sold by wholesale in the warehouses of merchants, or at fairs. They are there bought, not only by druggists, who sell them to the apothecaries, but also by pedlars, who often buy, at a reduced price, the refuse or adulterated portions of the drugs, in order to retail them in villages, at fairs, and through the country.

The wholesale merchants or druggists, acquire, at least, by experience, a knowledge of the exotic drugs: besides, their stocks can be accurately examined. But this cannot be performed in the case of pedlars, who always escape from every kind of police.

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The compound medicines are not prepared solely by the apothecaries; for several druggists and grocers also prepare these. Several merchants have extensive manufactories for the composition of medicines: these are sold at the great fairs, and especially at that of Beaucaire; and many medicines of that kind are also imported from foreign countries.

A vast number of these preparations, made by people very different from respectable apothecaries, are very ill composed, are changed in quality, and are adulterated. It has been proved, that at the fair of Beaucaire, a mixture of honey and jallap has been sold for Manna; the pulp of prunes for that of Tamarinds; and a mixture of honey and saffron, with a little brick dust, for the *Confectio de Hyacintho*.

The mineral waters, another species of medicines very much employed, are sold by patentees; while no reason can be alleged for excluding the apothecaries from selling these medicines; as it is easy to subject them to the same examinations with the proprietors of warehouses at present established, as will be afterwards pointed out.

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It is unnecessary to detail, minutely, the numerous abuses which originate from this order of affairs. It is sufficient to observe, that these dangerous abuses affect chiefly the ordinary class of people, especially those of the country.

§ III. *Regulations to be established for the Sale and Preparation of Medicines.*

It is to be wished, that the following regulations should be established as invariable laws :

1. That the charge of collecting, drying, preserving, and selling medicinal herbs, should be entrusted to apothecaries alone.

2. That the druggists should sell simple drugs only in wholesale ; and that their goods should be subjected to the same examinations as those of the apothecaries.

3. That pedlars should be prohibited from selling any kind of medicine ; and that the sale of drugs should be entrusted to merchants whose residence is fixed, and who may be subjected to regular inspection.

4. That every person should be prohibited from preparing and selling all compound medicines, and every medicinal composition, except the apothecaries who shall have been legally tried and passed; and that the importation of every foreign medicinal preparation, which can be equally well made in France, be prohibited without any exception.

5. That all regular apothecaries should be allowed to sell mineral waters, on the single condition, that they submit them to the examinations which shall be required.

SECTION II.

Of the Mode of Examining Simple and Compound Medicines, in the Warehouses of the Druggists, at the Fairs, and in the Shops of Apothecaries.

EVERY person dealing in medicines, either at fairs, in wholesale warehouses, or in laboratories, ought to be subject to an examination, by which it may be ascertained, if the drugs meant for sale be of a proper quality.

§ I. *Of the Mode of Examining Drugs at Fairs.*

1. BEFORE any drugs are exposed to sale at fairs, they must be submitted to the examination of commissioners, appointed to cause those which may be found of a bad quality to be thrown away or destroyed ; and to allow only those to be kept for sale, which are neither counterfeited nor adulterated.

2. The commissioners shall consist of two physicians, and two apothecaries, nominated by ballot by the administrative body, two members of whom shall accompany them in these different examinations.

3. The commissioners shall be changed, and new ones elected for each fair.

4. These commissioners shall repair at the place where the fair is to be held, as long before the commencement of the fair, as that they may be enabled to examine the state of the bales, cases, boxes, &c. which contain the simple drugs intended for sale.

5. The number of days during which that examination shall continue, must be fixed according to the extent of the fair. The merchants

chants shall be obliged to have all their packages ready before the examination, and arranged in such a manner that they can be conveniently inspected.

6. The goods which may arrive after this, shall not be exposed to sale, nor admitted within the boundary of the fair, till notice be sent to the commissioners, and till they have examined them.

7. The spoiled and adulterated drugs, and all the compound medicines, shall be seized and destroyed. The commissioners shall keep specimens of these, the identity of which shall be attested by the merchant. A fine shall be decreed for the adulteration of drugs.

8. On the day on which the fair commences, the commissioners shall attend early in the morning at the place where it is held, and shall make a general visit, in order to ascertain that the goods exposed to sale, are the same which were submitted to their examination.

9. The sale shall not begin till this review be finished ; and it shall be superintended, during the whole continuance of the fair, by some members of the administrative body, one of whom,

whom, at least, shall have accompanied the commissioners in their examinations.

§ II. *Of the Mode of Examining the Warehouses of Druggists.*

1. The commissioners nominated, as already described, shall visit, at indeterminate and unexpected times, the warehouses of druggists.

2. The druggists shall be obliged to discover all the warehouses, or places in which their drugs may be deposited; and, after having submitted them to an accurate inspection, the commissioners shall receive from them a signed declaration, by which they shall certify, that the warehouses and drugs subjected to examination, and described in the declaration, are all that they possess, and that they have concealed nothing from the inspection of the commissioners.

3. The drugs found of a bad quality, shall be sequestered and put under the double seal of the merchant and the municipality; and the commissioners shall keep a specimen of this to justify their judgement, in the event of any appeal against it. If no appeal be made,
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the drugs pronounced of a bad quality, shall be destroyed.

4. If any compounded medicines are found, they shall be seized and sequestered.

5. In cases of intentional adulteration, and of false declaration, proper punishments shall be decreed.

§ III. *Of the Mode of Examining the Shops of Apothecaries in Towns.*

1. Commissioners, nominated by ballot by the administrative body, shall inspect the shops of the apothecaries. These commissioners shall consist of two physicians, two apothecaries, and at least one member of the municipality.

2. They shall be elected annually, and shall visit the shops at indeterminate times.

3. They shall ascertain the state of the dried plants, of the simple and compound drugs, and that of the mineral waters, in the manner afterwards specified.

4. The drugs which shall be found of a bad quality, shall be sequestered, with the precautions and ceremonies already mentioned. In cases of evident fraud, proper punishments shall be decreed.

§ IV. *Of the Mode of Inspecting the Shops of Apothecaries in the Country.*

1. No person shall be permitted to sell simple or compound drugs in the country, unless he be legally authorised, and have had his name entered on the registers of the municipality in which he resides, and on those of the district in the jurisdiction to which that municipality shall belong.

2. The district shall annually nominate, by ballot, a physician and apothecary, who shall be appointed to inspect, at indeterminate and unexpected times, the shops of the country apothecaries, in the same manner as has been prescribed for the examination of the shops of apothecaries in towns.

It has been explained, in the second chapter of the second part of this Plan, in what manner the administrative bodies can procure, for the country apothecaries, genuine drugs at prime cost.

§ V. *Of the Mode of Examining Mineral Waters.*

THE preservation of mineral waters, depends, in the first place, on the attentions bestowed in taking them from the spring.

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It depends also on the cleanliness of the vessels in which they are contained, and on the manner in which these vessels are corked.

These attentions must vary according to the nature of the minerals.

The physicians established at the places where the mineral springs are situated, shall be requested to state the precautions which, experience has taught them, should be observed in the preservation of each kind of mineral water.

These precautions, ascertained in a distinct manner, shall be described in a regulation which shall be published.

The water for exportation, shall be drawn at a certain hour of the morning, and during a determinate space of time.

On these occasions, the physician appointed to inspect the spring, and a municipal officer, shall attend; and shall take care that all the necessary precautions be exactly observed. They shall seal the bottles, and shall give a certificate of the whole, which shall be added to the parcel exported.

It is particularly necessary, to take care that these waters be neither counterfeited nor adulterated, in the places where they are sold.

1. All the mineral waters, before they shall be delivered to the merchants to whom they are directed, in the places where they are sold, shall be received into an office, kept by one or more clerks nominated by the municipality.

2. Two physicians and one municipal officer, chosen annually by ballot, shall be appointed to inspect this office.

3. The arrival of every parcel shall be immediately announced to them by the clerk.

4. They shall, on this notice, attend at the office, where they shall ascertain the validity of every certificate which shall attest the contents of the parcel.

5. They shall examine the state of the waters ; and shall ascertain the correspondence of the parcels with the invoice, and with the certificates given when the water was drawn.

6. They shall inspect the seals affixed at the springs ; and shall, by means of a particular seal deposited in their hands, supply any of the bottles, where the former seal may be broken or rubbed off.

7. They shall give a certificate, dated and signed by them, describing the contents of each parcel. There shall be two such certificates.

cates. One of them shall be given to the apothecary to whom the parcel is addressed, and the other shall be contained in a particular register, which shall remain in the office.

8. The commissioners, in their visits to the shops of the apothecaries, shall examine the state of the mineral waters; and shall cause the letters of invoice, and the certificates of examination, to be shewn them.

SECTION III.

Of the Mode of preparing the most important Medicines in great quantities, and of the public Laboratories.

§ I. *Of the public Preparation of the most important Medicines.*

EACH apothecary ought to have the liberty of preparing all sorts of medicines: but, besides this, it will be proper to cause the most useful medicines, and those which may be kept for a long time without becoming changed, to be prepared publicly in great

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quantities, as is done at London, and in respect to Theriaca at Paris.

The preparation of medicines in this manner, should be made, according to uniform operations, in the capital, and in some of the great cities where medical colleges shall be established.

It should be preceded by the examination of the simple drugs which ought to enter into the composition of the medicines.

It should be performed by chosen apothecaries, and should take place under the inspection of physicians appointed by the administrative body, and of the professors of chemistry and the practice of medicine, and in presence of several members of the municipality.

This kind of authenticity, bestowed for so long a time on the preparation of Theriaca, ought to be extended with more reason to that of Tartar emetic, Kermes mineral, and the other preparations of Antimony, Iron, and Mercury; to that of the most important simple drugs, as the Cinchona; and to the operations for the purification of Opium, and its various preparations. These medicines would have the advantage of being constantly the same,
and

and of never varying in their effects, but in consequence of the habits and situations of the patients.

§ II. *Of the Great Public Laboratories.*

THE most necessary and best chosen medicines, and simple drugs, shall be kept in great public laboratories.

From these laboratories, the administrative bodies of the departments can procure the medicines at prime cost, in order to distribute them through the cantons, and to make them serve for the relief of the indigent sick in the country, as has been mentioned in the second chapter of the second part of this Plan.

If any apothecaries should prefer supplying themselves from these great laboratories, with the medicines prepared in the manner mentioned, to the trouble of preparing them themselves, they may be allowed them at a price below that of the regulated rates. The profits of the sale of medicines, of which a regular account shall be given in to the administrative body, may be applied towards the relief of the indigent sick.

SECTION IV.

Of the Improvement of the Dispensatory.

IT is necessary that there should be a dispensatory, which shall contain a table of the preparations which ought to be kept in apothecaries shops; the receipts of the prescriptions which physicians may order; and a list of the principal drugs, which are or may be used. The physicians of London and of Edinburgh, have made several alterations in their dispensaries, which the present state of medical and chemical knowledge appeared to them to require. In France, a similar reform ought to be undertaken.

In order to accomplish this, it will be necessary to collect, and to digest, the information and observations of the best informed medical practitioners and chemists.

Two or three professors may be chosen in each college of the kingdom, who shall unite in this duty.

These physicians shall be nominated by ballot, either by the college, or by the electoral body of the college.

They

They shall publish a list of subjects, on which all the physicians of the kingdom shall be requested to make known their observations. They shall then arrange the dispensatory ; on which the five colleges, and the medical academy, shall be further consulted. When it is completely arranged and finally settled, it shall be published throughout the whole extent of the kingdom.

Experience will determine at what periods new editions of the dispensatory should be undertaken.

SECTION V.

Of the Price of Medicines.

IT may be considered as a great abuse, that the price of simple and compound drugs, should be, in some degree, arbitrary. As all the medicines ought to be of a good quality, they should only differ in price, in consequence of the expences incurred in their carriage, and in their preparation. Nevertheless, different circum-

circumstances may occasion their price to be varied in different years.

It will be therefore necessary, that, in each department, there should be annually made out a list of rates; by which, all the expences being included, the simple drugs may be fixed at a price which shall afford the merchant a reasonable profit.

These rates shall be founded on the price at which the simple drugs may be sold at the fairs, and on the expences of carriage.

Information on this subject shall be obtained from reputable merchants, who shall be required to verify it by their accompt-books.

These rates shall be ascertained by an equal number of physicians and apothecaries, nominated by ballot by the department; some members of whom shall attend that committee; to which some druggists shall also be admitted, who shall be allowed to offer remarks.

In the same list of rates, the price of compounded medicines, as well as of simple drugs, shall be fixed.

The price of these medicines, shall be determined according to that of the substances
which

which enter into their composition, and according to the expence of preparation, and the loss which may be necessarily sustained by damage.

The price of mineral waters, shall also be included in these rates; and shall be fixed according to the expences incurred in drawing them from the springs, and to that of their carriage, and agreeably to the requisite compensation for accidental damages.

These rates shall be published, and sent to the physicians of the departments, and to the apothecaries, who shall be required to keep them in their shops, that they may be consulted when necessary.

A similar regulation is observed in several cities of Germany, and particularly at Berlin and Frankfort.

SECTION VI.

Of the Sale of Poisonous Substances.

There is another object which requires much attention.

This

This is the dangerous abuse of allowing the same merchant to sell those poisonous substances used in manufactures, such as Arsenic, Orpiment, Realgar, &c. and alimentary substances, such as Butter, Cheese, &c. which are often weighed in the same scales, handled by the same hands, and placed on the same tables. Although the accidents in consequence of this practice, are rare, they are not the less worthy of attention.

It may therefore be ordained, that the poisonous substances shall never be kept in the same warehouses, nor sold in the same shops with the alimentary substances which form a part of grocery. Perhaps it may even be necessary, that these substances should constitute a separate branch of commerce; and that every merchant should be prohibited from selling them to any persons but well known artists, or people who can be trusted.

It is equally important, to renew the prohibitions against wine merchants having their reservoirs lined with lead, or using any leaden vessels to contain wine or acids. All copper vessels should also be prohibited, in which it might be necessary to keep, for a length of
time,

time, any alimentary substances. These prohibitions have been made; decrees exist on these subjects, passed at the request of the officers of health: it is only necessary to put them in force.

The same rigour should be considered as indispensable, with regard to those poisonous substances which are used for the destruction of vermin. Arsenic, too often employed for this purpose, ought to be prohibited. There are some substances less dangerous to man, and equally fatal to these animals, such as the *Nux vomica*, which are sufficient for performing the same effects; and which ought to remove every pretext for using such dangerous substances as Arsenic, and its various preparations.

SECTION V.

Of Secret Remedies.

It appears probable, that the examination of secret remedies, can only be advantageously entrusted to a permanent company, who, more zealous in a subject essentially connected with the public good, and influenced by more
constant

constant and uniform principles than any temporary company could be, can alone accomplish the intention of this regulation, which is the destruction of Empiricism.

If several commissioners were appointed to examine new remedies, a great variety of opinions would be the consequence ; so that a remedy allowed in one department, might be prohibited in another.

If the National Assembly entrust that examination to one single company, two precautions seem necessary, in order to counteract the influence, both of prejudice and of professional zeal.

1. It is proposed, that the directory of the department, in the jurisdiction of which that company may be, shall nominate from among the physicians who do not reside in it, a number of commissioners, proportioned to that appointed by the company, to attend to the proofs along with them ; to be witnesses of the effects of the medicine ; and to establish these by reports, to which they shall each affix their signatures. These reports being then transcribed, a copy of them shall be transmitted to the company, and another shall remain
in

in the archives of the directory of the department.

These latter commissioners shall have no knowledge of the receipt of the medicine, which shall only be entrusted to those nominated by the company.

2. It appears equitable, that the inventor of the remedy shall have a list of the members of that company transmitted to him, with power to reject a certain number from the trials of his medicine, in a proportion to be settled by the National Assembly.

The following address, presented to the National Assembly on the 19th September 1790, by the Society of Medicine, on the subject of Secret Remedies, for which the inventors request permits, licences, or patents; and the plan of a regulation, at the end of that address; will exhibit the views of the Society on that part of medical police.

“ An Address to the National Assembly, on the Examination of Secret Remedies.

“ The Society of Medicine, was appointed by letters patent of the king, in the month of
August

August 1778; and, by an order dated the 26th May 1780, to examine the secret medicines, offered as new inventions, for which the proprietors request letters-patent, grants from the crown, or permits.

“ The Society has always thought it incumbent on it, to exert the most active vigilance, and the most rigorous strictness, in the performance of duties which have for their object, the care of the health and life of the citizens, in order to oppose the designs of the avaricious, or the dangerous illusions of ignorance.

“ In consequence of this, the Society has always made it a rule, to consider those remedies only as meriting its approbation, which comprehend the double advantage of being perfectly new, and of possessing, at least in some respects, a decided superiority over all the medicines of the same kind.

“ This rule has been religiously observed; and accordingly, for these fourteen years during which it has been established, the Society has only given its approbation to four medicines; two of which, only, were new; the other two being remedies formerly approved of, and generally employed.

“ The

“ The experience of fourteen years, has taught the Society several facts, which it considers incumbent on it to lay before the National Assembly. These facts certainly deserve the attention of the Assembly, as they regard the interests of mankind.

“ 1. Nothing is more dangerous than secrecy in matters relating to remedies. The most useful medicine often becomes dangerous, merely from the circumstance of its being involved in mystery. This mystery excites the enthusiasm, and cherishes the credulity of the people. It occasions uncertainty in the discrimination of the circumstances favourable for employing it, and inaccuracy in its application; for, if used, the practitioner has recourse to a remedy, with the nature of which he is unacquainted. The Society has, in its records, innumerable proofs of the unfortunate consequences, and, it will not scruple to declare, of the poisonous effects, occasioned by remedies, the success of which, in some cases, had been attested by reputable physicians, and by citizens of all ranks.

“ 2. As long as the dangerous privilege of keeping their composition a secret, is grant-

ed to the inventors of a few useful remedies, a great number of other people, jealous of the same advantages, but dreading the strictness of the same trials, will appear in all parts. The Society has seen, with regret, notwithstanding its endeavours, a great number of secret remedies exempted from their examination, approved, without being known, by the persons who have sanctioned their use, and, nevertheless, countenanced by plausible patronage. The few successful cases which have contributed to render these medicines celebrated, cannot be mentioned; for humanity has paid too dearly for these, by the sacrifice of a multitude of victims.

“ The composition of some useful remedies, therefore, being kept a secret, affords an obstacle to the destruction of quackery; an evil, which hitherto, like many others, has been principally injurious to the poor, and especially to the poor of the country.

“ If it had been necessary that the Society should have pointed out fully those evils of empiricism, it might have called on the testimony of several members of the National Assembly, who, being nearer the inhabitants of the

the country than the members of the Society, must have been, while exerting their attentions in their favour, witnesses of those misfortunes.

“ The wish of the Society therefore is, that, for the future, no patent or licence may be granted, by which the composition of an useful remedy can be kept secret; and that every new remedy, superior in efficacy to those of the same kind already known, may be bought by the Nation, and immediately afterwards published, in order that professional men may use it in the cases where it shall be proper, and under the modifications which circumstances may require, and not blindly on the faith of a patent.

“ In this manner, Louis XIV. bought, and made public, the remedy of the prior of Cabrieres for herniæ, and the powder of the Chartreux; and also, in the same manner, the British Parliament bought, and made public, Stevens’s medicine.

“ The price to be paid for permission to publish the composition of any medicine, ought to be determined by the consideration of its utility and superiority, and from the number

of cases in which it may be used; for it is by these two principles only, that the legal profit which it would have produced, had the property remained with the inventor, can be calculated.

“ The National Assembly may be assured, that the small number of new medicines which shall be deemed worthy of this distinction, can never form an object of considerable expence; a circumstance which is proved by the history of medicine.

“ It does not belong to the Society, but to the Legislators of France, to examine the right which one man may have to property, the concealment of which, regards the welfare of mankind; and to determine, under what circumstances, the interest of an individual ought to be sacrificed to that of the public.

“ It is sufficient for the Society to observe, that, if the National Assembly adopt these views, it will have destroyed, in addition to many others, one of the innumerable evils which originate from the avarice and credulity of mankind.

“ The Society, therefore, requests permission to submit to the Assembly, a plan of regulations

gulations relative to that subject; wherein it has endeavoured to unite every thing which, in the examination of new remedies, may obviate errors, and prevent abuses.”

*Plan of Regulations for the Examination of
New Remedies.*

I. No remedy shall be examined, unless at the desire of Government, or of the administrative bodies.

II. Three commissioners, at least, shall be nominated to give in a report; by which it shall be determined, if the remedy offered for examination, ought to be subjected to the trials necessary for ascertaining its efficacy.

III. No judgment shall be pronounced on any medicine, unless the commissioners appointed to examine it, shall be made acquainted with its composition; which, however, they shall be obliged to keep secret.

IV. No remedy shall be subjected to trial, unless it be new; and it shall be considered as new, if it be composed either of new substan-

ces, or of substances in which the inventor shall have discovered new qualities; or if, by a new manner of combining or exhibiting them, they acquire powers, or an efficacy, hitherto unknown. The commissioners shall be particularly attentive to discover, whether the remedy offered as new, be not prescribed in some pharmacopœia.

V. When a remedy shall be subjected to trial, the importance of the subject will determine, whether additional commissioners ought to be conjoined with those already appointed, in order to observe, along with them, the effects of the medicine. The remedy shall be prepared by the commissioners themselves; and they shall only use that preparation in their trials.

VI. The report of the experiments shall be drawn up in presence of all the commissioners, and shall be signed by them all.

VII. No remedy shall be judged worthy of being bought, unless it is ascertained by a sufficient number of proofs, that it is superior to the other medicines of the same nature hitherto known.

VIII.

VIII. In their report, the commissioners shall exhibit the result of their experiments; and if they judge the medicine worthy of purchase, they shall determine the title under which it ought to be announced; they shall fix the doses beyond which it would be dangerous to employ it, and the cases where it may be useful or hurtful; in order that these circumstances may be mentioned in the decision which shall be formed on it, and in the advertisements by which it shall be made public.

IX. If the judgment of the commissioners be in favour of the medicine, its value shall be determined, according to the report of the commissioners, by the degree and extent of its utility.

X. The day after the judgment, the composition of the remedy shall be made public, and sent to the directories of the departments.

XI. No medicines shall, for the future, be kept secret; and the inventors of any secret remedies, shall not be allowed to advertise or sell them, under any pretence, or under any denomination whatever.

XII. The same regulations and prohibitions shall be in force, respecting foreign secret medicines.

XIII. The remedies which have been approved at different times, which have still remained secret, and for which, their inventors have obtained patents, shall be reported, examined, and tried anew: they shall be subjected to the regulations above mentioned; and if there be cause for it, their composition shall be made public, agreeably to the terms of these regulations.

XIV. All patents or licences contrary to these regulations, shall be null and void.

XV. With respect to cosmetic preparations which may affect the health, the sale shall be prohibited, until the physicians, consulted on that subject by the directories of the departments, shall have declared, that these preparations contain nothing injurious to health.

XVI. The various medicines allotted for the treatment of external diseases, for destroying deformities of the skin, and for curing diseases of the eyes, teeth, and mouth, shall not be included under the title of Simple Cosmetics.

C H A P. VI.

On an Important Addition which ought to be made in the Bills of Mortality.

SINCE the registers of births, marriages, and deaths, have been well kept, much useful information on the population, and on the proportions of life, both of mankind in general, and of different ages in particular, has been derived from their examination ; and, from the comparison of these results, with the local circumstances of which, they are in part the effects, true ideas of the salubrity of different climates are acquired.

But the tables of mortality in France, are still very imperfect. In England, Holland, and Geneva,¹ they have, in a particular column, the names of the diseases of which the deceased

¹ The plan of those of Geneva, is remarkably simple. Those which are published at Deventer in Holland, are also digested according to the best principles. In England and Geneva, there are surgeons in each quarter, who take cognizance of the causes of death.

ed have died.² It is unnecessary to detail, at full length, the numerous advantages resulting from a similar arrangement. By this addition, the bills of mortality shew to what diseases the inhabitants of each canton are most liable; they exhibit, for example, the proportion of those who are destroyed by phthisis pulmonalis, or the small pox; the number of women who die in childbed; the infirmities which prove fatal to old people; the exact number of those carried off by epidemics; and that of those who die suddenly. These circumstances, and many more, may afford, both to the administration and to practitioners of medicine, very valuable articles of information; of which, it is much to be wished, that France may no longer be deprived.

The National Assembly, by decreeing that the causes of death shall be inserted in the bills of mortality, will add another good office to the many for which the State is already indebted to it.

It

² In Holland, in order to render this operation more easy, diseases have been arranged under a certain number of classes to which the various causes of death may be referred, on which information may be given by the relation of the deceased.

It may, perhaps, be objected, that there are a certain number of diseases regarded as disgraceful, which the relations of the deceased will never disclose, such as, venereal and epileptic complaints. But the greatest number of these diseases, before they occasion death, degenerate into other complaints which are not concealed; and the proportion of those who die of these very complaints, to that of those who are cut off by disorders of another nature, is not so considerable as to affect the calculations which may be made on the bills of mortality. Besides, even although some general conclusions may be rendered uncertain by that source of error, there are others which will not be in the smallest degree injured. It will, for example, always be known what number of persons die of the measles, of intermittent fevers, of scurvy, &c.; and the advantages which that knowledge alone may produce, are sufficient to induce the National Assembly to regulate that important subject.

PART

PART FOURTH.

Of Veterinary Medicine.

CHAP. I.

Of Veterinary Medicine in General.

VETERINARY Medicine, although attended to by the antients, has been too long neglected by the moderns. This present century has the honour of having re-established this branch of medicine, which is worthy, in every respect, of the attention of legislators, and of the study of philosophers. It may be added, that no good reason can be alleged for considering the healing art as applied to animals, distinct from that applied to man. The same general principles are applicable; and therefore, to understand in what respects these two parts of the same science resemble each other, and in what they differ, they ought certainly to be united.

The veterinary schools established at Charenton, are almost as much at a distance, as if they were at the corner of a remote province.

vince. No physician or surgeon is engaged in what is carried on there; and no correspondence is kept up between the professors of these schools, and those by whom the healing art, as applied to man, is taught.

These schools ought therefore to be transferred to Paris; ¹ and they will then afford an object of emulation to a great number of persons. They should be established in the vicinity of the medical schools; or, what will be better, they should form a part of these. Physicians and surgeons will then visit them in crowds; they will attend the courses; they will make both studies advance in union. The professors of both branches of instruction, will communicate to each other their projects and labours;

¹ The investigations on comparative anatomy, which will be made in Paris, if the veterinary school is transported there, ought not to be dreaded. *1st*, Because these occupations do not occasion nearly so fetid effluvia, as those which arise daily from the numerous dissecting rooms established in the capital, for teaching the anatomy of the human body. *2^{dly}*, Because experience has proved, that no bad consequence whatever results from investigating the anatomy of animals in large well-aired rooms. And, *3^{dly}*, Because it is easy and not expensive, to renew frequently the subjects of that branch of anatomy; and the offals may be sent away daily.

labours; and their knowledge will be increased from that reciprocal intelligence. By this means, the physiology of animals will be very much improved; the young men will become accustomed to extend their ideas; and all the branches of medicine, mutually illustrating each other, will be brought to perfection at the same time. This is the only means by which the veterinary science can be made to flourish; can be diffused, and can be rendered really useful; by multiplying the number of those who study and practise it, and by obtaining for it all the attention from the departments, which it merits.

Perhaps it may be necessary, that besides these veterinary schools, which, it is proposed, shall be transported from Charenton to Paris; schools of the same kind should be annexed to some of the other medical colleges already mentioned. But it will be particularly necessary, that practical veterinary schools should be established in the middle of those provinces where a great number of useful domestic animals¹ are reared, as in Normandie, Le Morvan,

¹ It appears to the Society, that these moveable practical schools, as they may be styled, since they should be transported

van, Auvergne, &c. These schools should be taught by a small number of men well acquainted with the healing art as it is applicable to animals, who should take charge of the pupils named by the departments, to whom they might impart the principles of art, by conducting them to diseased animals.

CHAPTER II.

Plan for Teaching Veterinary Medicine.

VETERINARY medicine should be taught, by being divided into five great departments, each of which shall be entrusted to one professor.

SECTION I.

Course of Lectures on the Anatomy of Beasts.

THE horse, the ox, the sheep, and the dog, shall form the chief subjects of these demonstrations:

transported to those places where epidemic and other diseases of cattle prevail, will be well situated in the neighbourhood of Rouen, Clermont, Dijon, Poitiers, or of Limoges and Auch.

strations: their bones, particularly those of their extremities, their ligaments, their articulations, which are attacked with a great number of diseases; their muscles, especially those of their shoulders and extremities; their viscera, their external glands, their principal nerves, and their blood vessels, shall be described.

It will be unnecessary to demonstrate minutely to the pupils, the structure of those organs, such as the Cerebrum and Cerebellum, the functions of which are not perfectly known; and seldom form the seat of the diseases on which they are consulted. The professors should confine their descriptions to the structure of those parts on which they will be obliged to operate. If this rule be not strictly observed, much precious time will be lost; the pupils will receive superficial instructions, from which they can derive little profit; and, instead of useful practitioners, dangerous disputants will alone be formed.

It must therefore be remembered, that the true design of public utility cannot be accomplished, if the professors shew much attention to the theoretical parts of the art; for empirical
practice

practice is almost only necessary for the treatment of the diseases of animals. For this reason, their physiology should only be taught in so far as it is essentially connected with the principles on which their diseases should be treated : when its applications to these are obvious, the professors may point them out. If an opposite plan be adopted, they will cease to address themselves to their pupils.

The pupils will be, in an especial manner, improved by familiar instructions. Elementary books should be published for their improvement, as the directors of the school at Alfort have already done with success. They ought particularly to be instructed, by engaging their attention with numerous demonstrations, by putting questions to them, and by making them frequently repeat their lessons, either among themselves, or under the eyes of the principal of the school.

A professor, who should be the assistant of the professor of Anatomy, were it only to shew the connection between these two sciences, shall be entrusted with the charge of teaching the anatomy of animals. The two best informed pupils shall act as dissectors to him :

these offices shall form one of the rewards decreed for their love of the art.

SECTION II.

Course of Lectures on the Knowledge of the external Figure of Animals.

THE study of the external figure of animals, shall comprehend that of the beauties and defects of the most important domestic animals. The rules which ought to be followed in the choice of these animals, with respect to the uses for which they are allotted, shall be pointed out; and the manner of breeding them for the purpose of these uses, shall be explained. The natural proportions of the animal, its motions, and the relation between the different parts during growth, ought to be carefully examined. In order to instruct the pupils as effectually as possible, they should be conducted to the fairs and markets of the neighbouring places, where they should be made to apply the rules which shall have been explained to them.

This course shall be concluded by two important branches of instruction. The one shall

shall comprehend the Hygiene, that is, the description of the mode of nourishing animals, and of the domestic attentions, especially respecting cleanliness, which they require. The other shall include the multiplication of the race of animals, or the science of the stud.

A single professor shall be charged with this important course; several branches of which, have never formed the subject of regular study. It will be difficult to find a professor of this kind. He cannot be the assistant of any of those who teach the healing art as applied to man; because his duties require a distinct species of knowledge, which is connected, in a very distant degree only, with the Hygiene applicable to man.

SECTION III.

Course of Lectures on the Institutions of the Veterinary Art.

THIS course shall comprehend every thing relating to Materia Medica, Botany, Chemistry, and Pharmacy, together with some general views of Pathology, with which the students of the

Veterinary art ought to be acquainted. It is necessary to make a judicious choice of the essential parts of those sciences which can illustrate the Veterinary art, and not to exceed these.

The medicines, in particular, ought to be very simple ; and no part of the *Materia Medica* should be less expensive.

The professor charged with this course, may be the assistant of the professor of the Institutions of Medicine.

SECTION IV.

Course of Lectures on the Practice of Veterinary Medicine and Surgery.

THE lectures of this course shall include the treatment of external and internal diseases, and the mode of performing operations, and of applying bandages ; and shall also comprehend the illustration of the practice in Veterinary hospitals.

The professor shall be occupied every hour of the day in the discharge of these duties ; for the performance of which he will require an assistant.

SECTION

SECTION V.

Course of Lectures on Farriery.

THIS course shall be divided into two parts; one of which shall relate to the theory and practice of the Forge, and the other to the theory and practice of Shoeing animals.

The art of shoeing shall be practised on the horse, the ass, the mule, and sometimes also on the ox.

For this course, a professor and assistant will be necessary.

These two departments of the Veterinary art, can only be well demonstrated and understood, by being treated as in the shops of farriers. In general, it will require at least a year to learn the dexterity and steadiness, which are the essential qualifications of a good operator in Farriery.

Reflections.

THE courses of lectures on Anatomy, and on the Chirurgical operations, may be given during Winter; and those on the Institutions,

and the external figure of animals, during the Summer. It will be necessary to take care, in particular, that the pupils shall pass the greatest part of their time at the forge, and in the Veterinary hospitals, where various offices shall be bestowed on them, according to their industry and abilities.

It will especially be considered as a very honourable distinction, to be sent to superintend the treatment of an epidemic disease among cattle.

This branch of the healing art requires more particular attention; as those who form the subjects of its practice, mute during their sufferings, present, from that circumstance, difficulties to the practitioner, which, in the treatment of human diseases, do not occur.

By means of the proposed instructions, four years will be sufficient to constitute a well informed Veterinary practitioner.

The professorships in the Veterinary schools, shall be adjudged by competition. These competitions, and the examinations of the pupils, shall be regulated by the same principles which have been established for the medical colleges;

colleges ; the plan of which has been already described.

The Veterinary practitioners, and all those who shall cultivate that science, shall be invited to communicate their observations to the academical body, which ought to be entrusted with the charge of a general correspondence, on every department of the healing art.

PART FIFTH.

Of the Manner of advancing the Progress of Medicine by the Labours of an Academy.

CHAP. I.

Of the Labours of a Medical Academy in general, and of the Advantages which may be derived from it.

IT is not enough to adopt proper measures for instituting sufficient opportunities for medical study ; it is necessary also to provide for the improvement of the science of medicine : for, by teaching, it is exhibited such as it is ;

but, for advancing its progress, something more is required.

When the history of the healing art, from the most remote antiquity, to the present time, is considered, it will be readily allowed, that experience has formed the most valuable part of the science; and that it can only be rendered more perfect by new facts.

These might be easily acquired, if, by fixing the attention of medical practitioners on every thing which can contribute to improve their art, and if, by multiplying the number of places to which they may aspire, and that of honours which they may obtain, they were provided with means by which they may readily arrange, improve to advantage, and publish, the remarkable facts which they shall have collected. After having properly organized the hospitals, and after having diffused well informed medical practitioners over the whole country, it only remains necessary to establish such connections between those of the profession, as shall render the fruits of the observations of each individual common to all: and if the correspondence by which this can be effected, have a centre, from which the rays of
science

science which are scattered, may be reflected in an united state, this object will be accomplished, and every thing will have been done for the improvement of medicine, which can be expected from an enlightened Government.

It belongs to societies or academies, to carry on this correspondence with the members of the profession; to excite a spirit of emulation among them; to induce them to preserve the results of their daily practice; to collect their observations; and to publish them for the benefit of the world. It is also the duty of societies, to take advantage even of accidental cures, and to transmit to posterity, a numerous series of facts, which would otherwise have remained for ever buried in oblivion,

The medical practitioners of Breslau, Copenhagen, and Berlin, are the first who united themselves, in order to publish their works in common. The practitioners distributed through the provinces and cantons of Sweden, have also a centre of correspondence in the vicinity of that of the administration. And for a long time before a medical society was instituted in France, notwithstanding the wishes for such an establishment, formed by Chirac, Fontenelle, d'Alembert,

d'Alembert, and Bordeu, similar societies which have served as a model for that of Paris, were established at Barcelona, Madrid, Edinburgh, and London; and the celebrity which these latter have acquired by their works, is well known.

In order to exhibit the advantages of such an institution, it will be sufficient to enumerate the duties with which a medical society or academy ought to be charged.

The transactions of a medical academy, should respect the following subjects :

(1.) To correspond with the best informed domestic and foreign medical practitioners ; to collect what each shall have observed most worthy of attention in cities, in the country, and in hospitals ; which form the great fields for instruction in the healing art.

(2.) To subject to the most scrupulous trials, the new remedies, the virtues of which shall have been extolled ; and to multiply the observations, experiments, and trials, which may render medical knowledge more accurate, and more extensively useful.

(3.) To digest a plan of projected investigations, every part of which shall be well concerted,

certed, and every different branch of which, may be proposed successively by the academy to its members, in such a manner, that each may be furnished with a subject of particular attention.

(4.) To present to young practitioners a table of the diseases peculiar to each canton, and of the remedies which are best adapted to them. These important subjects of information, will be furnished by means of well written essays on the medical topography of the different cantons, districts, and departments.

(5.) To collect carefully, the descriptions of the different endemic and epidemic diseases, and of the epidemic disorders of cattle; and to publish an account of these, according to the order of the seasons.

(6.) To add to these, meteorological observations, made with instruments which may be compared with each other, and at determinate distances; so that, from the union of these two subjects, there may result what the modern physicians style a medical year, (*annus medicus*) in its full extent.

(7.)

(7.) To publish in collections, the arrangement of which shall include all the departments of medicine, the different observations and essays which the society shall have collected, and the dissertations of those to whom prizes shall have been adjudged.

(8.) To answer all the requisitions relative to the public salubrity, by useful advices and instructions; and to send, on important occasions, some of its members to those places where their presence may be deemed necessary.

(9.) To combat with vigour that spirit of system which invariably leads to error; and thus to oppose all the changes which a fertile imagination, and its numerous chimeras, might occasion in the healing art.

(10.) To invite the physicians, surgeons, and apothecaries of towns, to unite themselves into a committee or council, in order to work in concert, for the improvement of the art; ¹ to preserve its true principles; to support its dignity; and to connect itself with these societies, by an uninterrupted correspondence.

(11.)

¹ With these views, the practitioners of Aix have already formed themselves into a medical society.

(11.) To form thus, out of all the citizens of the empire, who love, and who cultivate the healing art, one great body, animated in every part with the same zeal, and constantly governed by the principles of the public welfare, of reason, and of equality.

The Commissioners of the Society of Medicine will not aver, that their society has fulfilled all the articles above specified: But they can with truth observe;—

That the correspondence of the Society of Medicine is very extensive; that every thing which relates to the improvement of the healing art in foreign countries, is speedily communicated to it; that it has formed numerous connections with the colleges and academical bodies or societies, which are occupied in a manner analogous to it; that all the medical practitioners, charged with the treatment of popular diseases, and the greatest number of those entrusted with the care of hospitals, are inserted in the list of the Society, and maintain with it an active correspondence; and that, speedily informed of every attack on the health of the public, it can make known, without delay,

delay, the measures necessary to be taken to obviate it.

That, since the institution of the Society, it has published the analyses of several substances, which had not hitherto been examined with attention, such as several kinds of quinquina, and various mineral waters; and that it has published a very instructive method, at full length, by the assistance of which, these different analyses may be repeated every where, according to uniform principles, the results of which may be compared with each other.

That the Society has been successively employed, in pointing out the treatment of fevers of every kind; as, of intermittents of a favourable or malignant nature; of exanthematous, and of slow nervous fevers; of the diseases of artisans; of those of armies; of those of puerperal women; of those of new-born infants, and of children; of the different kinds of inflammatory diseases; of chronic disorders, such as the scurvy and dropsy; of the phthisis, and of the different changes of which the fluids of the human body are susceptible.

That

That the Society has not neglected the application of natural philosophy to the healing art, as is proved by its researches on the use of eudiometers in medicine, and on the comparison of meteorological observations, which it collects in much greater quantity than any academy of medicine before it ever did; and that, to render the results of these observations more certain, it has laid down a plan for them, which has been transmitted to all its corresponding members.

That all its publications from the year 1776, to the public meeting of the 31st of August 1790, form a chain of works, which have been successively offered to the examination of professional people.

That the Society annually distributes prizes to the authors of the best essays transmitted to it, on the treatment of the epidemic diseases of men and of cattle; and that it has already published dissertations on these subjects, which may serve as a model for similar works.

That it has collected more than two hundred essays on the medical topography of the kingdom; and that, in the year 1789, it published

blished a table of these, in which it marked the cantons, a description of which was yet wanting.

That the Society has already published nine volumes in quarto, without any expence to Government ; and part of which has been already translated in foreign countries.

That there has not happened, for these fourteen years, any event prejudicial to the health of the public, in which it has not evinced a great zeal ; and that, independent of the volumes already mentioned, it has published and distributed a great number of instructive essays, and of observations or advices, on various important subjects : On the tetanus ; on the leprosy, or red disease of Caienne ; on the hydrophobia, which has been a particular object of its investigation, with the mode of treatment as far as it has been ascertained ; on medical electricity, which was unknown in France, with its true effects, and the mode of exhibiting it, which was made known by one of its members ; on the medical properties of the magnet ; on the catarrh of the year 1776 ; on the epidemic dysentery of the 1779 ; on the miliary fever of Bas-Languedoc of 1782 ;
on

on the epidemic diseases of the 1785 ; on the diseases of wheat, and chiefly on the caries with which it was attacked in the same year, and on the means to prevent the propagation of it ; on the cold of the winters 1788 and 1789 ; on the subsistence of cattle during that latter season ; on the treatment of maniacs ; on that of venereal complaints in the country ; on that of the puerperal fever, that of the itch, and of various cutaneous eruptions ; on the mephitical exhalations of the most noxious common sewers, and on the way in which they kill animals ; on the dangers of the exhalations of marshes ; on the inconveniences which arise from burying in churches, and especially in those of the island of Malta ; on the removal of dead bodies from the church and churchyard of the Saints-Innocens, the most considerable and most remarkable of all similar operations ever undertaken ; and on the nyctalopia, a disease to which the soldiers of certain garrisons are peculiarly liable.

That the members of the Society of Medicine have repaired a great many times to places where epidemic diseases prevailed among men and cattle, both within the jurisdiction

of the ancient royalty of Paris, a circumstance which has happened four times even during the last season, at the request of the intermedial commission, and in the most remote places, as l'Artois, le Boulonnois, in the vicinity of the city of Eu, at Brest, at Dinan, where one of the members, M. Jeanroi, was seized with the epidemic which he had treated with as much zeal as success, and had nearly become a sacrifice to it; at l'Orient, to treat the fevers of the jails there; and also at Sologne, where M. l'Abbe Teflier was in as much danger as M. Jeanroi had been: and on all these occasions, the members of the Society, content with the trifling salaries which they receive, solicited no recompence for such laborious services, by which they were exposed to so many dangers.

That the Society of Medicine being the decided enemy of all empiricism, has constantly opposed, vigorously, its progress; that for these fourteen years, it has approved of no more than four remedies, two of which only are new; and that it has rejected more than eight hundred, as can be proved by its records, and more especially by three printed lists, which

which it has published from the year 1778 to the year 1782 ; and that all the trials and analyses of these medicines were executed gratis.

That it has re-established the police in the administration of the mineral waters of the kingdom ; that it has digested particular regulations for maintaining good order in the management of these ; and that it has every year collected observations calculated to prove the effect of these waters in the treatment of diseases.

That, in short, the Society cannot avoid believing, that it has done some good, and that the public is not dissatisfied with its labours ; for, on one hand, the administrators frequently request its advice, while citizens, zealous for the public welfare, found prizes for its disposal ; and, on the other hand, the French medical practitioners, who are most esteemed for great experience and for abilities, enrich it by their observations, work according to the spirit of its publications, and consider it an honour to belong to it.

This short view, presents to the consideration of the National Assembly, the efforts

which the Society of Medicine has made to render itself useful. The commissioners of that Society, are very far from wishing to exaggerate the services which it has rendered; they think that, by the new division of the kingdom, it will be more easy for it to distribute its assistance; that as the directories will pay more attention to the distresses of the people, the Society will contribute more uniformly and constantly to their relief; that by examining carefully its regulations, and by endeavouring, by a new arrangement of them, to render them worthy of the free constitution by which France is governed, there will result several advantages, which the Society cannot hasten too much to enjoy: they hope that, after the honourable adoption which it is expected it will receive, it will no longer experience those obstacles by which its efforts have been so often interrupted; for the members of the Society are well aware, that their investigations would have been executed, both in a more complete and more expeditious manner, if those who have persecuted them with so much malevolence, had adopted the more useful and noble principle, of aiding them with
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their advice, and of seconding, by their vigilance, the success of their undertakings.

On the whole, the commissioners have supposed, *1st*, That it would be productive of much utility, if the physicians, surgeons, and apothecaries of towns, especially of the chief cities of the departments, were to form themselves into societies, both for the purpose of affording assistance to the people, and of contributing, as much as in their power, to the improvement of the healing art: *2^{dly}*, That the medical practitioners of the country be invited to adopt the same views: *3^{dly}*, That it would be proper that the whole medical correspondence should have, for a centre, an academical body placed in the capital, in the vicinity of the great powers by which the State is governed.

1. It will be sufficient, to prove the utility of this plan, to observe, that all the medical academies or societies instituted in Europe, have been placed in great cities, and that their correspondence has nowhere been found to be lessened, by the establishments of the same kind diffused over the different parts of the same empire.

2. Experience has proved, that academies have infinitely greater success in Paris than in the provinces; the reason of which undoubtedly is, that, in the capital, there are a number of men of genius, to be met with nowhere else.

3. It has been more than once found, that it is very necessary that the Academy of Medicine should be placed near to the Academy of Sciences; to be, as it were, always a witness of its investigations; to be animated by the same spirit, and to pursue the same route, in order to obtain new conclusions.

4. With respect to administration, it is surely proper, that all the principal demands, all the important investigations, and all the great events relating to the public salubrity, should be written on the same records; and that this interesting collection should be within reach of the legislative and executive powers, to be consulted when necessary.

5. If it were proposed that the Society or Academy of Medicine, should be established in the middle of one of the colleges, it might be answered, that the professors, being few in number, and having duties to fulfil every day
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and every moment, it would be burthening them too much, to require that they should form the active part of an academy, to which they may easily belong as members, without being necessarily obliged to direct its undertakings. It might also be observed, that the object of colleges and of academies, is very different; that the professors ought to possess the complete knowledge of the science which they teach, but that they have no charge of its improvement; that the members of the academies, on the contrary, are entrusted with that charge, and their employment should consist in searching after new facts; that, setting off from the same point, they direct their views to very different objects; for the former, charged with the instruction of youth, and tracing the art to its origin, turn from the present to the past, while the latter regard constantly the future; that thus, the colleges and academies ought to complete the circle of human life, but not to be confounded together; for their object is separate.

Induced by these motives, the commissioners conclude, that the Academy of Medicine ought to remain distinct from every college;

that there should be only one principal Academy, as only one Academy of Sciences will be adopted by the Nation; and that both these ought to be placed in Paris.

C H A P. II.

Principles of the Regulations projected for the Meetings and Transactions of the Academy or Society of Medicine.

THE principles here proposed, are conformable to those of a plan of regulations, which the Society of Medicine presented to the National Assembly, on the 19th of December 1790, agreeably to a decree of the 20th August preceding.

The functions attributed to the Academy of Medicine, shall be the following, viz. ¹

I. It shall hold a correspondence on every thing which regards the improvement of the healing

¹ It was not thought necessary to detail, on this occasion, the police or internal management of an Academy of Medicine. These are described in the plan referred to,

healing art, both with the councils of health, with the professors of the practical schools of the departments, and with the most celebrated domestic and foreign physicians and surgeons, especially with those who are entrusted with the charge of treating the diseases of the people in hospitals and in the country. It shall publish the history of epidemic diseases. It shall return answers, without delay, to all the questions on public salubrity, which shall be proposed to it by the administrative bodies. It shall send, when required, commissioners to those places where their presence may be judged useful. It shall examine new remedies, and mineral waters, when consulted on these objects by the Administration. It shall publish yearly its views on the subjects, which shall appear to it to merit, in a particular manner, the attention of medical practitioners; and also the observations and essays which it shall have collected and approved.

II. The Academy or Society of Medicine, shall consist of two great classes of members; one of which shall include the resident, and the other the non-resident members. Into the former class, shall be admitted physicians, surgeons,

surgeons, and those apothecaries and philosophers, who are intimately acquainted with the Veterinary art, and with the sciences connected with Medicine. These different members shall all enjoy the same privileges; and their names shall be inserted on the list according to the order of their admission into the Academy. The class of non-resident members shall be divided into two orders, comprehending the domestic and foreign members.

III. Among the number of physicians, surgeons, apothecaries, or philosophers, who shall have sent essays or observations, the Academy shall distinguish those who may have shewn the greatest zeal and care to afford it information on every thing which relates to its undertakings; and shall elect them correspondent members.

IV. The office-bearers of the Academy shall consist of a director, and vice director, who shall be renewed annually, and a secretary and treasurer. The director shall preside in the academy; he shall regulate the deliberations, and the order in which the paper shall be read; and he shall nominate the committees,

tees, except on important occasions, when they shall be elected by ballot.

V. In order to make its investigations more particularly known, and to announce and distribute its prizes, the Academy of Medicine shall hold annually two public meetings, at which the secretary shall read the eulogiums of those members who shall have died during the year. Other members shall read essays, which shall be adapted as much as possible to the capacities of the majority of the audience.

VI. The subjects which the Academy of Medicine, shall consider as susceptible of discussion or investigation, shall be remitted to committees, who shall give in a report, in writing, of the different subjects which have been entrusted to their examination. One of these committees shall be appropriated to objects of public salubrity ; a second shall arrange every thing relative to the prizes ; and a third shall take cognizance of the works which the Academy shall publish.

VII. A majority of votes of the resident members shall be necessary in the election of the office-bearers, and of the members of the Academy.

Academy. In other elections, the majority of those present shall be sufficient.

VIII. Among the investigations, essays, and experiments, which the Academy of Medicine shall judge conducive to improve the most essential, and the least understood parts of the healing art, it shall point out those which shall appear of the greatest importance, and for which it shall require particular assistance; and it shall submit to the National Assembly the plan of that assistance: If the Assembly order it, that plan shall be immediately put in execution; and an accurate account of it shall be rendered to the Assembly, in writing, in the following year. In the mean time, the Society shall present another plan for new researches, forming an uninterrupted course of observations and experiments, which shall be made public, in order that the committees or councils of health, and all the practitioners of medicine in general, may give their advice on the subject, and may unite their endeavours to those of the members of the Academy, to accelerate the improvement of the healing art.

IX.

IX. The researches and observations which shall be undertaken for the improvement of the art, shall be made particularly in the hospitals accommodated for teaching Clinical Medicine, where there will be expert professors, attentive observers, and numerous pupils, ready to execute every thing which shall be prescribed to them. If the experiments are successful, the professors of the Practical or Clinical schools of the departments, and the physicians of the great hospitals, shall be informed of them. These experiments, repeated by them with the greatest precautions, and all at the same time, will confirm or overturn the original expectations. Every thing which the professors of the Clinical schools, and the physicians of the hospitals, shall have first observed, shall be in like manner communicated to the Academy; and in this way, a correspondence on practical subjects will be established, from which the greatest advantages for the advancement of medicine will result.

X. The Academy shall publish volumes or collections of its transactions, which shall be divided into two parts; the first of which shall contain the history of its transactions; and the
second,

second, the essays which it shall collect and approve.

The principal subjects of these volumes shall be, 1. The accounts of public meetings. 2. The announcement and distribution of prizes. 3. The historical eulogiums of deceased members. 4. The meteorological observations. 5. Medical topography. 6. The description of endemic and epidemic diseases, and of the epidemics of cattle. 7. Observations on the practice of physic, and on chirurgical diseases. 8. Anatomical remarks. 9. Investigations on the seat of diseases. 10. Medical Chemistry. 11. The examination of new medicines. 12. The analysis and properties of mineral and medicinal waters. 13. Botany, and the natural history of the substances which serve for aliment or medicine. 14. Observations on general philosophy applicable to medicine.

XI. Among the essays and observations which the Academy shall collect, some may be published in whole, others in an abridged state; and it will be necessary to keep some to be united to investigations on the same subject. The meteorological observations, topographical essays, descriptions of epidemic diseases,

eases, and those of the prevailing diseases of the year, shall be kept for that purpose. The observations on the practice of physic, contrasted with analagous facts, will, by this means, acquire a new value. The secretary of the Academy of Medicine, shall therefore preserve carefully these different papers, the titles of which shall be entered on the register, whenever they are received. After a certain time, and at stated terms, the committees named by the Academy, shall examine the general repository of correspondence; they shall divide the observations and essays into several parts, each of which shall be remitted to one of the members, who shall be charged to make out a connected work on the principal subject of these essays and observations, while, at the same time, he shall do justice to each of the authors; to exhibit the present state of the science; and to point out what still remains to be done on the part, with the examination of which he was entrusted.

XII. The Academy of Medicine shall procure all the works, both national and foreign, which shall be published on medicine; and a particular and minute account shall be given

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at its meetings, of those which contain the observations and essays most conducive to accelerate the progress of the healing art.

Principles of the Plan contained in this Work.

I. MEDICINE and surgery shall, in future, be taught in the same schools. The medical and chirurgical students shall be subjected to the same trials. The practitioners of medicine and surgery, shall enjoy the same privileges; and shall all be denominated physicians.

II. Medicine and surgery shall be taught by public professors, and by private teachers, and in the various hospitals of the kingdom, which shall be properly regulated for that purpose.

III. Complete courses of lectures on the healing art, shall be delivered in colleges, where all the departments of the profession shall be consigned to ten professors.

IV. Six of these professors shall teach the preliminary, and direct theoretical sciences; and four shall undertake to explain the practice

tice of medicine and surgery, in an hospital subservient to that purpose. None of these public professors shall be allowed to teach privately.

V. The professors shall, in future, lecture in the French language, in order that the means of instruction may be more accessible than they have hitherto been.

VI. The six professors of the theoretical sciences, shall receive from the State equal salaries. But as the four professors of the practice of physic and surgery, must necessarily spend a great part of each day in the clinical school, they shall have double the sum as salaries, which the other professors enjoy.

VII. The pupils shall pay fees to the professors whose lectures they attend. Proper measures shall be adopted, that the total of that expenditure, during the whole time of their studies, shall not exceed the sum of 500 livres for each student.

VIII. The pupils who shall not be in a condition to pay, shall be presented, and have their expences defrayed, by the departments; and shall be permitted to attend the classes gratis.

IX. Each college shall be composed of ten professors and a secretary.

X. The professors shall elect from among themselves, a president, who shall be renewed every six months ¹; and the rank which each professor shall hold next to him, shall be ascertained by his seniority in the professorship.

XI. Every thing which relates to the management of the classes, shall be regulated by the professors: they shall, however, exercise no power out of the college, either over the other medical practitioners, or over the students, who ought to be governed by the public police.

XII. There shall be formed in the vicinity of the directories of the departments, within the jurisdiction of which the college shall be established, a committee or council, charged with the inspection of every thing which relates to public teaching; into which, there shall always be admitted a sufficient number of physicians, elected from among those of the jurisdiction of the college. ² That committee shall

¹ Or every year.

² These are the physicians who have been formerly described under the title of censors of the colleges, which they will, in fact, have the charge of inspecting, along

shall take care, that the laws and regulations shall be observed. It shall see, that the professors are assiduous; it shall attend, when necessary, to the complaints of the students; and shall, at the conclusion of its duty, render a public account of the commission with which it shall have been charged.

XIII. The physicians who shall be members of the committee of public instruction, shall be chosen by an electoral body, formed of the electors of the departments, in the jurisdiction of which the medical college shall be established, and of a certain number of physicians,³ elected from among those of the jurisdiction of the college, who shall be convened every second year for that purpose.

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XIV.

along with the other members of that committee. The committee of the National Assembly, appointed to superintend the concerns of the poor, has, in like manner, proposed, to place in the vicinity of the departments, an agency, or committee, charged to judge of the assistance which should be afforded to the poor of towns and of the country.

³ It is impossible to be more particular, till the principles by which instruction in general shall be regulated, be ascertained by the National Assembly.

XIV. There shall be five medical colleges in the kingdom ; of which, one shall be established at Paris, one at Montpellier, one at Bourdeaux, a fourth at Nantes, or at Rennes, and the fifth at Strasbourg, or at Nancy, Dijon, or Besançon.

XV. The eighty-three departments shall be divided in such a manner, as to form circles for each of the colleges, nearly equal in extent, which will serve to ascertain the mode of convening the physicians in certain cases of election ; and shall not otherwise be binding, either with respect to the studies, or the conferring of degrees.

XVI. All the professors shall be chosen by a competition.

XVII. There shall be five examiners or judges of the competition ; two of whom shall always be chosen from among the professors of the college, and three from among the physicians of its jurisdiction.

XVIII. The five judges shall be chosen by the electoral body mentioned, No. XIII.

XIX. The president of the department, three members of the directory, and, at least, three members of the committee of public instruction,

struction, ¹ shall attend the meetings and business of the competitions, and shall sign the minutes of them.

XX. The questions and answers shall, like the lectures and demonstrations, be in the French language; and shall always be proposed, and received, in public.

XXI. The examination in the competition, shall consist of written questions, to which the competitors shall answer *viva voce*.

XXII. These questions shall be contrived in such a manner, as to comprehend the whole extent of the science which shall form the subject of examination. Each competitor shall answer twelve questions.

XXIII. When all the competitors shall have answered the questions, the choice shall be decided by three ballots. The first shall be that of the three judges; the second, that of the students who have passed with approbation the two first examinations; and the third, that of the competitors themselves. The majority of suffrages of the students shall be reckoned one vote; that of the competitors shall have

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¹ These are denominated, in page 228, &c. censors of the college.

the same value ; and these two votes shall be balanced with those of the five judges.

XXIV. The competitor, in whose favour there shall be the greatest number of votes, shall be proclaimed professor ; and his name shall be presented to the King, from whom he shall receive a commission.

XXV. Every professor may be replaced, after having exercised his functions for twelve years.

XXVI. Consequently, when that period has elapsed, five judges shall be chosen by the electoral body. (XIII.) ; and the students, who shall have passed with approbation the two first examinations, shall be assembled.

XXVII. The five judges and the students, shall vote by separate ballots, to determine if there ought to be a new competition. In balancing the votes, the majority of those of the students shall be reckoned one ; and the professor shall continue to perform the functions of his chair, if two thirds of the votes do not concur for a new competition.

XXVIII. There shall be no regulations respecting the order or duration of study, for these cannot be fixed by any rule which is applicable

plicable to every student ; and therefore, can only be suggested by way of advice.

XXIX. The students shall not therefore be obliged, either to attend the different professors, or to produce certificates of study. In whatever place, or in whatever schools they may have studied, they shall be equally admitted to examination ; for on such occasions, nothing ought to be considered but knowledge.

XXX. The examinations of students shall always be carried on in public, and after having been announced by advertisements written in the French language.

XXXI. The examinations shall always be gratis ; and the professors shall not be allowed, under any pretext whatever, any fees for their trouble on such occasions.

XXXII. In every medical college, at the conclusion of the courses for the year, three examinations in succession, shall be appointed. The two first shall respect the theory of medicine, and the third the practice of physic.

XXXIII. The examination on the practice of physic, shall be held in the hospital in which the clinical school is established ; and it alone

shall continue, at least, as long as the two first examinations put together.

XXXIV. These examinations shall be carried on in the French language, and shall be confined to the essential and fundamental principles of the healing art. The questions shall be disposed in such a manner, as to comprehend the principal departments of the science on which the students ought to be examined. The answers to these questions, shall be made chiefly in writing.

XXXV. The professors shall proceed without delay, in presence of one of the members of the directory of the department, and of three members of the committee of public instruction, to the examination of the written answers returned by the students. The judgment of the professors shall be also in writing, and shall contain the reasons for the decision: it shall be read in public; and after that judgment, the students shall be passed or remitted to a subsequent examination.

XXXVI. The students may require from the president of the college, an attested copy of their answers, and of the judgment of the examiners.

XXXVII.

XXXVII. The writing which shall constitute the degree of Doctor of Medicine, shall be couched in the most simple style ; and shall be in the same form for every candidate. ¹

XXXVIII. Each candidate shall take the civic oath, before he can be proclaimed physician.

XXXIX. At the end of the examinations, the professors shall note down on the registers of the college, the names of those students who shall have answered best ; and the various employments of the laboratories, of the library, of the botanic garden, and of the clinical wards, shall be distributed among them, in proportion to their industry, and to the branches of knowledge, to which they may have principally attached themselves.

XL. As one of the principal advantages of a reform in the medical department ought to be,

¹ The regulations of the college of Munster, which are of a very late date, establish a contrary practice. The physicians there, are distributed into several orders ; to each of which, a peculiar form of degree is appropriated. The commissioners of the Society of Medicine have thought, that it is of great consequence to avoid such classifications, which become the sources of rivalships and animosities, for which the public too often suffers.

be, to distribute proper assistance to the inhabitants of the country, each department shall be authorised to establish, in one of the hospitals the best organized within its jurisdiction, a practical school, where the physicians appropriated to that purpose, shall be particularly educated.

XLI. The physician, surgeon, and apothecary of that hospital, shall be able to teach, in that practical school, the true fundamental principles of the healing art.

XLII. The best informed medical practitioners shall be appointed to form elementary treatises on the different branches of the science of Medicine, which shall be chiefly designed for rendering the mode of teaching them more uniform and more easy.

XLIII. There shall be established in all the hospitals organized for publicly teaching medicine, bursaries, or gratuitous places; into which, both the medical students¹ educated at the expence of the departments, and those whose parents can maintain them there, by paying a moderate board, shall be admitted.

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¹ It must be here remembered, that Medicine and Surgery are in future inseparable.

These pupils shall be instructed, lodged, and boarded, in those hospitals, and they shall there perform all the useful duties about the persons of the patients.

XLIV. When the studies of these pupils are sufficiently well advanced, they shall repair to one of the medical colleges, either to complete their education by means of bursaries or gratuitous places, instituted in the clinical schools of the college, if they shall have merited these, or to undergo the examinations prescribed by law, and to be there passed as physicians.

XLV. The indigent sick, both in the cities and in the country, shall receive, in their own houses, the assistance of the Administration as much as possible ; and the physicians appointed to attend them, shall be placed in the cantons for the country, in the quarters which shall be formed by circles for the towns, and in the chief cities of the district and the department.

XLVI. The physicians of the cantons and of the quarters, shall practise every branch of medicine and of surgery. They shall take charge of the treatment of epidemic and popular
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lar diseases. They shall practise midwifery, and shall inoculate. They shall superintend the management of foundling children at nurse. They shall have remitted to them by the administrative bodies, a list of the indigent sick, whom they ought to visit gratis. They shall inregister their observations, and shall hold a correspondence on the different subjects of their attention, according to the nature of the case, with the physicians of the district, or with the councils of health of the departments, or with the academy of medicine.

XLVII. In each city of every district, a physician shall be always in readiness to repair to any part where his presence may be judged useful, whether his advice be asked by the physicians of the cantons, or he be required by the directory, for some object of public salubrity.

XLVIII. The physicians of the city where the department shall be situated, shall form a council of health, which shall meet whenever it shall be convened by the directory, to determine on the assistance necessary in cases of epidemics, or on any other subject relating to the health of the people. The municipalities
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of great cities, may also establish similar councils or committees, for the objects of public salubrity.

XLIX. In difficult cases, the cantons and districts shall demand assistance from the councils of health of the department, the members of which shall repair, when required, to the places where their presence may be deemed useful; and all of these may apply to the academy of medicine.

L. The medicines appropriated for the use of the indigent sick, shall be kept and sent in boxes, the appearance of which shall be well known; and the Procureur-Syndic shall furnish these, in proportion as they are required.

LI. In every clinical or practical school, both of the colleges and of the departments, one of the professors, well acquainted with the art of midwifery, shall be particularly appointed to teach the practice of that art to midwives, who shall not be allowed to practise, unless they have submitted to a public examination before the professors of these schools. When passed, they may exercise their profession throughout the whole extent of the kingdom.

LII.

LII. A catalogue of all the regular and resident midwives in the different cantons and districts, ¹ shall be made out. They shall be provided with a list of the poor women whom they shall attend gratis; and they shall be paid, from the public fund, a certain sum for each delivery.

LIII. The hospitals of the kingdom in which there shall be no established clinical school, shall, nevertheless, be arranged in such a manner, as to afford to the students, every possible

¹ The Society of Medicine, having desired to know the state of midwives in France, requested, in the year 1786, the minister to engage Messieurs the Intendants of the provinces, to furnish it with all the necessary information on that important subject. That this undertaking might be executed in an uniform manner, tables, consisting of four columns, were printed. These were required to contain, in the first column, the place of residence of the midwives; in the second, their names and ages; in the third, the schools where they were taught; and in the fourth, observations on the manner in which they performed their functions.

From the examination of all these tables which have been transmitted to the Society, with the answers of the
Intendants;

ble opportunity of acquiring instruction by observation. Consequently, the regulation of the wards, the visits of the physicians, and the distribution of the pupils, shall be disposed according to these views. In this manner, every thing which shall be done for the relief of mankind, will be made to advance the progress of the healing art.

LIV. Besides the ordinary hospitals, particular ones shall be appropriated for the reception of persons affected with contagious diseases ; for that of pregnant and lying-in women ; for the practice of inoculation, and for the treatment of lunatics. There shall also be hospitals in the vicinity of the most powerful mineral waters.

LV. There shall also be particular hospitals in the sea-port towns and garrisoned cities, for the reception of sailors and soldiers ; and in these, practical schools shall be established.

LVI.

Intendants, it appears, 1st, That several extensive cantons are not supplied with midwives ; and, 2^{dly}, that the greatest number of those who practise midwifery, have not studied the art regularly ; that they have only learned it from the midwives of the neighbourhood, and that they practise it without judgment.

LVI. The physicians, surgeons, and apothecaries of hospitals, shall be admitted into the council of administration of these institutions, and shall have the privilege of voting there.

LVII. In future, no person shall be permitted to assume the title, nor to perform the functions of physician, unless he shall have been passed by one of the five medical colleges.

LVIII. All those who are passed by the five colleges, shall have the privilege of practising and teaching medicine and surgery throughout the whole kingdom.

LIX. In order to be permitted to practise in any municipality, it will be sufficient to present the degree of Doctor, to be examined by the municipal body; who, after having ascertained its validity, shall insert the name of him to whom it belongs, in the catalogue of the physicians of the place.

LX. The functions relating to public salubrity, shall be conferred on physicians, in the two following ways :

1st, Those who ought to be appointed to examine medical substances, to attend the indigent sick, and to treat popular and epidemic diseases,

eases ; those who ought to practise in hospitals where no clinical school is established, and those who shall make reports on judicial cases, shall be nominated by ballot, by the members of the bodies to whom the right of regulating these different objects may belong.

2dly, The physicians and surgeons of the hospitals where schools for the practice of medicine shall have been established by the departments, shall be chosen by an electoral body, formed of a certain number of electors of the department, and of a certain number of physicians elected from among those within its jurisdiction, who shall be assembled for that purpose.

LXI. There shall, in future, be no intermediate office in hospitals, between that of the physicians and surgeons, and that of the pupils ; and as the mode of appointing them ought to be the same for all, the place of *Gagnant Maîtrise* shall be abolished.

LXII. The physicians and surgeons of hospitals, shall, after having had charge of them for 12 years, submit to a new election ; but they may be continued in office. No one can

be elected to these places, unless he obtain the majority of votes.

LXIII. The art of pharmacy shall be taught in the five medical colleges, and in the practical schools of the departments ; and the examination of the pupils who shall have studied it, ¹ shall take place, either in one of the five colleges, and shall be made by the professors, to whom a number of apothecaries, to be afterwards determined, shall be conjoined for that purpose ; or in the practical schools of the departments, where apothecaries shall be, in the same manner, conjoined to the professors of these schools. These apothecaries shall be chosen by ballot, by the directories of the departments, in the jurisdiction of which the examination shall be held.

LXIV. The method to be observed in these examinations, both with respect to the questions and the task which the pupils must perform, shall be the same as that prescribed for the
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¹ It is particularly by attending apothecaries shops, that these pupils can be instructed. But as knowledge ought to be the sole title which should be carried to an examination, it was not thought expedient to prescribe to them, either the mode or time of apprenticeship or study.

the students of medicine, agreeably to regulations on that subject, which shall be made out on the same principles.

LXV. The apothecaries who shall be legally passed, shall have the privilege of exercising their profession throughout the whole kingdom.

LXVI. The physicians, surgeons, and apothecaries, shall no longer form corporations; as every individual ought to practise his profession under the sole protection of the laws.

LXVII. The sale and preparation of medicines, both simple and compound, and the sale of mineral waters, shall be entrusted exclusively, with the precautions suggested in the particular regulations on these subjects, to the legal apothecaries. But it is understood, that this shall not affect the rights of the proprietors of mineral springs, nor the sale of mixed substances, which are not purely pharmaceutic; and for which, particular regulations shall be enacted.

LXVIII. The simple drugs, nevertheless, which form articles of commerce, shall continue to be sold at fairs, and in wholesale by the merchants, on condition that they shall

submit to have their drugs properly examined, that their state and quality may be ascertained.

LXIX. The drugs exposed to sale at fairs, shall be examined before the fairs begin, by commissioners appointed for that purpose. Commissioners shall also be nominated, to inspect the warehouses of drug merchants, and the shops of apothecaries, both in the towns and in the country.

LXX. The administrative bodies shall adopt measures for having the most efficacious medical substances prepared publicly in great laboratories, in those cities where the medical colleges are established. These, as well as the best chosen simple drugs, shall be kept in those laboratories, to serve chiefly for the use of hospitals, and of the indigent sick who inhabit the towns and the country.

LXXI. The poisonous substances employed in manufactures, shall not, for the future, be sold in the same shops with alimentary substances, or those subservient to the different uses of the kitchen. Proper regulations, strictly enforced, shall be adopted on that subject, as on every thing which relates to substances injurious

jurious to health, and to the necessary precautions respecting eatables.

LXXII. The sale of secret remedies, shall, in future, be prohibited ; consequently, every privilege contrary to this regulation, shall be suppressed and abolished.

LXXIII. There shall only be, within the whole kingdom, a single medical body entrusted with the charge of examining secret remedies.

LXXIV. When a new remedy shall be offered to the public, notice of it shall be sent to the medical body whom the National Assembly shall particularly appoint to the charge of examining such medicines. That body shall elect commissioners to whom the composition of the remedy shall be communicated, and who shall be desired to return a report on its efficacy. But the proprietor of the new remedy shall be presented with a list of the members of that company, and may reject one third from the examination of his medicine.

LXXV. The commissioners shall, in the first place, determine whether the remedy in question, ought to be admitted to the trials necessary to ascertain the properties attributed

to it. If the medicine be admitted to trial, a number of new commissioners, equal to that of the first nominated by ballot by the directory of the department, within the jurisdiction of which, the body charged to undertake the examination shall be placed, shall be conjoined with them, in order to make the experiments, and sign the report on the subject. The first commissioners shall alone be acquainted with the composition of the medicine; and, to avoid all fraud, the remedy subjected to trial, shall be prepared by them.

LXXVI. If both the former and latter commissioners decide, that the remedy in question is new, and is superior to the medicines of the same kind already known, and hitherto employed, it shall be purchased at the expence of the State. Its composition shall be immediately afterwards published, and sent to the directories of the departments.

LXXVII. Veterinary medicine shall be taught in schools annexed to the medical colleges, in order that the professors and students of both, may have a correspondence with each other, may be mutually improved, and may
concur

concur in advancing the progress of the healing art.

LXXVIII. Besides the veterinary schools annexed to the medical colleges, practical veterinary schools shall be established in the counties which abound most in cattle, where the pupils, under the superintendence of men well informed in that branch of the healing art, may learn to practise on animals entrusted to their care.

LXXIX. With a view to establish useful connections between all persons who cultivate the healing art, both in France and in foreign countries, and especially between the professional men who are charged with the functions regarding the people; and in order to derive advantage from their labours, by collecting the observations which each individual shall have made, there shall be instituted in the capital, an academical body, which shall form the centre of that correspondence; to whom, in cases of difficulty, the requisitions relative to public salubrity shall be addressed. This academical body, for the purpose of contributing in an effectual manner towards the advancement of

the healing art, shall admit, as members, persons who are well acquainted with any of the different departments of that art.

LXXX. The offices of sworn physician and surgeon, shall, in future, be suppressed.

LXXXI. At the renewal of each court of justice, the members of the court shall nominate by ballot, three physicians or coroners, who shall be appointed to make reports in judicial cases. The first of these physicians who shall be nominated, shall have the principal charge.

LXXXII. In every examination or visit, the coroner shall be accompanied by two assistants or respectable witnesses. On important occasions, the two other coroners shall be conjoined to these assistants. The report shall always be drawn up on the spot, signed both by the coroners and witnesses, and shall be deposited, within twenty-four hours, with the recorder of the court by whom the coroners shall have been appointed.

LXXXIII. A general form shall be established for these reports, in order that the subjects may not be confounded together in them.

LXXXIV.

LXXXIV. Whenever the judge shall have any doubts on these reports, and at all times in important cases, a copy of them shall be sent to the professors of anatomy, and of clinical medicine and surgery, within the jurisdiction of which the affair in question shall have happened, in order that these reports may be verified by them. Their decision shall be written at the end of the reports, and shall be immediately transmitted to the judge.

LXXXV. A course of lectures on medical jurisprudence, shall be delivered every year in each medical college.

LXXXVI. In future, the causes of death, such as they shall be reported by the relations of the deceased, shall be inserted in the bills of mortality. The physicians of the quarters in the cities, and those of the cantons in the country, shall take care that as few errors as possible be committed in these registers.

S E C T.

S E C T. II.

Medical Observations.

I.

History of a Case, in which there took place a remarkable Slowness of the Pulse. Communicated to Dr Duncan, by Dr Thomas Spens, Physician in Edinburgh.

ON the 16th of May 1792, about 9 o'clock in the evening, I was sent for to see T. R., a man in the 54th year of his age, a common labouring mechanic. After having heard from him, some account of his complaints, I was much surprised, upon examining the state of his pulse, to find, that it beat
only

only twenty-four strokes in a minute. These strokes, however, as far as I could judge, were at perfectly equal intervals, and of the natural strength of the pulse of a man in good health.

He informed me, that, about 3 o'clock in the afternoon, he had been suddenly taken ill while standing on the street; that he had fallen to the ground senseless; and that, according to the accounts given him, by those who were present, he had continued in that state for about five minutes. His face was slightly cut, in two different places, by the fall; but his head did not seem to be in any way materially injured. From the time of this first attack, till I saw him, he had been affected with three other fits, nearly of a similar nature. These, however, were attended with some convulsive motions of his limbs, and with screaming during the fit. When I saw him, he was somewhat drowsy, but perfectly recollected and distinct, and his voice was as strong as when he enjoyed a state of perfect health; nor had he, at that time, any other complaint.

He

He imputed these attacks, to his having been intoxicated the night before, with strong ale and whisky; and to his having drank in the forenoon, when very thirsty, a large quantity of cold water. In the morning, he had two natural stools; but, besides being uncommonly thirsty during the former part of the day, he was frequently affected with sickness at stomach, and had vomited up his dinner soon after it was taken.

Upon visiting him, in the morning of the 17th, I found that he had been attacked with several fits during the night, which were of considerably longer duration, and more violent than the former ones: he was attacked with one of them, while drinking some infusion of camomile to assist vomiting. Upon examining his pulse, I found that it beat only twenty-three strokes in the minute; nor was any change produced upon it, by his drinking a tea-cupful of wine, and a glassful of whisky, which I directed for him; and, an hour after, I found it in precisely the same state as before. He was now directed to take some spirit of Hartshorn; but, by mistake, it was given him very little diluted, and produced much uneasiness

ness in his throat and mouth. From this cause, I found him in great distress at one o'clock ; but it seemed to have produced no change on the state of his pulse, which at this time beat twenty-four strokes in a minute, and was of the same strength and regularity as before. Washing his mouth with vinegar and water, gave him almost immediate relief ; and, at nine in the evening, I found that he had continued free from any return of fits or of faintness, since five in the morning. At this time I gave him thirty drops of the Spiritus Ammoniac aromaticus, in about two ounces of water, which he found very agreeable. But he had hardly swallowed it, when he felt himself faint, and cried out that one of his fits was coming on : but, upon taking a tea-cupful of wine, which I directed for him, this uneasiness went off. His pulse still continued in the same state as before. During the course of the day, he had frequently sat up in bed, without feeling any uneasy faintness, or threatening of fit.

When I visited him in the morning of the 18th, I was informed that he had slept a good deal during the night, but had been frequently

ly

ly faint. He had, however, ate an egg and some bread at breakfast. He had no headach, vertigo, or pain in any part of his body ; but his pulse beat only twenty-six strokes in the minute. About mid-day, he got up and put on his clothes. He had a natural stool, and afterwards walked out to his work-shop. Upon his return, finding himself very well, and inclined to eat, he sat down to dinner : but, upon taking some broth, he almost instantly felt faint, and had the same most distressing sensation as if one of his former fits were coming on. The same circumstances took place twice afterwards, on his attempting to swallow something solid. About eight in the evening, wishing again to try what would be the effect of swallowing, while I was present, he took a bit of newly toasted bread. But he had no sooner smelt it, than he felt some of the sensations of a beginning fit ; and, as soon as he had tasted it, he almost instantly cried out, and fell back senseless, with smart convulsions of all his muscles. He apparently recovered, however, in a few seconds ; but hardly any pulse could be felt for a good many seconds.

On

On the morning of the 19th, I learnt that he had been very faint almost the whole night, and that he had been attacked with frequent fits, attended with violent convulsions ; and every thing he attempted to take, seemed to have had the effect of inducing a fit. He now felt, at their commencement, a violent pain which darted through his head ; but when free from the fit, he was perfectly recollected and distinct. When I numbered his pulse, I found that it beat only ten strokes in the minute, though it still continued equally strong and regular as before. I ordered him to take a glassful of whisky, after which he remained for an hour pretty quiet and easy ; and his pulse rose again to twenty-four strokes in the minute. But at three in the afternoon, I found that his pulse was only nine in the minute ; and it was neither so strong, nor so regular as before. He was now in great distress from constant sickness and faintness ; but perfectly sensible and recollected. At seven in the evening, I found his pulse still nine in the minute, but much weaker. He continued sensible, but was unable to speak. He was not, however, affected with any more returns of the convulsions. During the whole of the following

following night, the people who attended him, observed that he never moved his right hand or leg ; and he expired on the 20th, about nine in the morning.

During the continuance of this patient's disease, recourse was had, on different occasions, to trials of cordials, stimulants, and opiates. But none of them seemed to produce any obvious change on the state of his complaints.

The day after his death, the body was opened by Mr Fyfe, and, upon the most careful examination, no morbid appearance, of any consequence, could be discovered, either in the thorax or abdomen. Upon examining the head, about two ounces of a watery fluid were found in the ventricles of the brain ; and a gelatinous appearance was observable in some parts of the pia mater. But nothing of this kind could be discovered about the thalami nervorum opticorum, as is often observed in cases of hydrocephalus. A small ossification was discovered on the back part of the dura mater ; but no other morbid appearance could be detected.

What may have been the state of this patient's pulse prior to the attack on
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the 16th, I know not. But I was informed by Mr Latta, surgeon in Edinburgh; who had attended him when he laboured under a fever about two years before; that, during the course of that disease, his pulse was often above 120 in the minute; and that when the fever left him, it returned to the natural standard of between 60 and 70 in the minute.

How far the different symptoms, which occurred in this case, particularly the slowness of the pulse, were to be attributed to the effusion of water in the ventricles of the brain, may perhaps be a question. A slow pulse, at least at a particular period of the disease, is well known to be one of the most remarkable symptoms in hydrocephalus; and the water found in the ventricles of the brain, was the only cause detected on dissection, to which this symptom could be attributed. If, however, we suppose water in the ventricles of the brain to have been here the sole cause of disease, we must of necessity conclude, that hydrocephalus may not only exist, but even prove fatal, though the greater part of those symptoms, which are commonly considered as marking that affection, be totally absent.

II.

Account of the Effects derived from the use of the Terra ponderosa muriata, in a case of Scrophula, by ——— of Aberdeen.

DECEMBER 2d, 1790. An unmarried woman, aged 23, about twenty months ago, began to be affected with a tumour on the posterior part of the left carpus, attended with much pain. It gradually increased in size for about eleven months from its commencement, when it began to discharge some sanious matter, the pain still continuing violent, accompanied with sickness and other febrile symptoms. Since that period, successive tumours have made their appearance; and there are at present six ulcerated tumours surrounding the carpus; the one that first appeared being alone cicatrised. They yield an ill-conditioned purulent discharge, resembling the serum of milk mixed with many small pieces of its coagulum. She found advantage from
drinking

drinking the mineral waters of Pananich last Summer; but was still in great distress when she came to Aberdeen about four weeks ago; the pain being particularly severe in the night-time.

In this situation, she applied to me for medical advice. I ordered her an opiate every night, an anodyne lotion for the ulcers, the use of the Peruvian bark, and a chalybeate, under the form of pills. These medicines relieved her from the severity of the pain, and procured her rest during the night. It is proper to remark, that the menses have been all along extremely irregular with this patient; that when they did appear, she says the tumours increased in size, with much additional pain. But she has not experienced that evacuation at all, since the month of February last. Three years ago she was affected with much distortion of the spine, about the middle of the dorsal vertebræ, from which she received complete relief in the Royal Infirmary at this place, by means of caustic issues.

Having procured, by means of Dr Duncan of Edinburgh, a genuine preparation of the *Terra ponderosa muriata*, I resolved to give a

fair trial to its medical virtues in the case of this patient. There is at present no considerable swelling of the integuments, excepting in the very seat of the tumours; but the bones of the carpus are evidently enlarged.

I began the use of the muriated Barytes, in the following form :

R. Aq. Menth. Pip. unc. iv.

Syr. Simp. unc. i.

Solut. Terr. pond. muriat. gt. x.

M. cap. semunciam ter de die.

Dec. 6. She takes the mixture without any inconvenience. One of the ulcers has discharged copiously. The matter was at first bloody; but at present it is moderately good pus.

Repet. Mist. cum addit. gt. v. solut.

Terr. ponderos.

Dec. 11. She continues her mixture, and is sensible of an increased discharge of urine.

Repet. cum gt. xx. solut. et cap. semunc. ter de die.

Dec. 17. Continues the mixture without any inconvenience. Several of the small orifices discharge thin serous matter, with some pus. The diseased wrist measures eight inches
and

and an half in circumference ; the sound one measures six inches and a quarter. R. Solut. Terr. ponderos. muriat. gt. xxvi. Aq. Menth. pip. unc. vi. M. cap. ut antea.

1791, Jan. 4. She has continued to use her mixture regularly since last report. Her appetite is improved ; the flow of urine is evidently increased ; and she has had, of late, a gentle diaphoresis during the night. The menses appeared on Wednesday last. The swelling of the carpus is diminished ; the ulcers yield some matter occasionally, but not very well conditioned. Repet. Mist. cum Solut. Terr. ponderos. gt. xxxvi.

Jan. 16. The ulcers discharge a sanious matter. Repet. Mist. cum gt. xl.

Jan. 26. The sores are much as at last report. She sweats every night in bed ; but does not feel in the least weakened by it. Repet. Mist. cum Solut. Terr. ponderos. gt. xlv. et foveat part. affect. cum Solut. quotid.

Feb. 4. Since the sores began to be bathed with the solution, a small portion of the integuments has been excoriated. The granulations underneath look pretty healthy. The sores continue to discharge matter of a pretty

good consistence. Since Saturday last, being about the period of menstruation, she has been affected occasionally with headach and nausea. Cont. Mist. u. a. Belly costive. Cap. hor. 7ma vesp. Pil. Aloet. gr. x. Fov. part. Solut. 2da quaq. die.

Feb. 14. Since last report, the patient has not attended as usual to receive her medicines. On inquiry, I found that she had been confined at home, and for the most part to bed. She has been affected with all the train of symptoms attending irregular menstruation; and the distortion of her spine has again begun to appear.

For these complaints she was recommended to the Dispensary; and was soon after admitted as a patient into the Royal Infirmary here. After a long trial, her complaints remained without much amendment; and, early in the Summer, she was directed to go to the country, where she had been accustomed to reside. I have lately had occasion to inquire after her, and find, that within two months after leaving this place, her complicated disorders proved fatal.

Although

Although the above case has had an unfavourable termination, yet, in my opinion, it throws light, in some measure, on the virtues of the *Terra ponderosa muriata*. The history of the case evidently shews, that this medicine may be easily exhibited in moderate doses, and these gradually increased to some considerable extent. That it operates as a stimulus to the urinary system, appears from the reports of December 11. and January 4. It discovered its tonic effects, by increasing the power of the muscular fibres of the stomach; and of consequence improving the appetite for food. It also stimulated the lymphatic system, and produced gentle diaphoresis during the night, by increasing the action of the vessels situated on the surface of the body. The vessels of the uterus likewise had been roused to action; for about the beginning of January, the menses appeared after an interval of eleven months. The discharge from the ulcers of the carpus, appeared to have become rather of a more bland consistence, by the use of this medicine. Upon the whole, had the case of this patient been purely scrophula, affecting the glands or other soft parts, I should have been very san-

guine in my hope, of producing a cure. But the enlargement of the bones of the carpus, and of the dorsal vertebræ, both perhaps depending on the same cause, joined to that numerous train of disorders that follow suppression of the menses, rendered the circumstances of this patient particularly unfavourable.

III.

III.

The History of three Cases of Phthisis Pulmonalis, treated by Cuprum Vitriolatum, and Conium Maculatum ; two of which terminated favourably. By James M. Adair, M. D. formerly Physician at Northallerton, now at Edinburgh.

MR G. D. of Northallerton, aged 19, born of scrophulous parents, of whose family several had died of Phthisis; tall, of a fallow complexion, and black hair, consulted me in July 1790. He complained of short, frequent cough, with scanty purulent expectoration; pain of the right side, about the seventh rib; laborious breathing; and copious night sweats. His appetite was bad; and he was considerably emaciated, and very weak. His pulse was quick and soft; and, towards evening, he was evidently affected with hectic fever, which remitted on the appearance of the sweat, about three o'clock in the morning.

His

His tongue was preternaturally red ; and the white of his eyes, and his teeth, had a bluish pearly cast. The state of his bowels was various ; but he was, most frequently, costive. In short. he had every symptom of genuine scrophulous phthisis.

These complaints had begun about two years before, and had gradually increased till the time he consulted me. It was the opinion of his friends, and of Mr Dent, a very respectable surgeon, who attended him, that he could not live many weeks.

I began, by directing the use of a diet, consisting chiefly of milk, with plainly dressed fresh meat for dinner ; and indulged him in a little mild ale, and a glass of wine. The following medicines were prescribed :

R. Vitriol. cærul. gr. x. Solut. ex

Aq. tepid. unc. v. adde

Spt. Vitriol. ten. gtt. x. Fiat Julepum
Emeticum.

Sign.

Let the patient drink about a pint of warm water, and swallow, immediately afterwards, half an ounce of the emetic julap, which will almost instantly produce gentle vomiting.

This

This is to be taken, for the present, every other evening, at 8 o'clock; and, after ten days shall have elapsed, every morning. Should half an ounce not excite vomiting, an ounce may be taken.

R. Pulv. folior. cicut. recens ficcata. dr. ii.

Mucilag. Gum-Arab. spiss. q. s. ut fiat
massa in pilulas xxx. dividenda.

Let one pill be taken every morning and evening; and let the dose be gradually increased, by the addition of one pill every fourth day. If vertigo supervene, let the patient lie in bed till it subsides.

A blister was also applied to the pained part, and a laxative mixture directed to be occasionally used.

He continued for some weeks to use these means, without much apparent benefit; except that his appetite and strength were somewhat improved, and that the sweating did not appear on the night when the vitriolic emetic was taken; an effect which, in other cases also, I have pretty uniformly observed to take place. His cough, and difficulty of breathing, however, rather increased; and, for some days, we were in almost hourly expectation of
his

his death. The medicines were occasionally intermitted, as the symptoms seemed to require.

From about the beginning of September, however, he gradually grew better. His cough was easier, his expectoration more free, and of a healthier appearance. His hectic fever and night sweats left him ; his strength and flesh returned ; and, before the middle of October, he had perfectly regained his former health, which he has ever since continued to enjoy, having grown considerably robust.

Mrs M., aged about 26, of a sanguine temperament, very fair, with thin skin and blue eyes, the mother of several children, consulted me in Spring 1791. She had been for some months affected with short cough ; with scanty expectoration, of a doubtful nature ; pain of the left side ; night sweats ; considerable loss of appetite, flesh and strength ; amenorrhœa, pulse weak, but not very quick ; bowels generally costive. She had taken several medicines without relief.

As she seemed to labour under incipient phthisis, a milk diet, and the same medicines which

which had been ordered for Mr D., were prescribed for her. She was, by much intreaty, prevailed on, to allow a blister to be applied to the pained part.

Under the use of these remedies, her appetite and strength daily improved; her cough, pain, and sweats, left her, and she recovered rapidly.

Some months after, she had a slight relapse, from imprudent exposure to cold and moisture, which was soon removed, by returning to the use of the medicines.

Elizabeth Sedgwick, a poor woman, aged 26, mother of three children, consulted me about the same time with Mr D. She complained of severe cough, with copious purulent expectoration, occasionally streaked with blood; considerable pain of the left side of the thorax; hectic fever; and night sweats, alternating with diarrhœa. Her pulse was extremely quick and weak; her appetite gone; her strength diminished; and she was much emaciated. The tongue was florid; the teeth and eyes pearly. She was suckling a poor weakly child.

child of fifteen months old. She had been affected in this way for above six months.

I insisted strenuously, that she should wean the child, which however, she did not do; probably, because she could not afford to feed it otherwise. Judging that the poor diet she had hitherto used, might have considerable share in aggravating her complaints, I ordered her to drink a glass of port wine occasionally; and to use animal broths, meat, milk, and other food of easy digestion, and considerable nutritive powers; with which she was supplied, by the charity of families in the town.

At the same time, I directed the use of the hemlock pills, and of the solutio cupri vitriolati, in the usual way, interposing the opiates or acids, as the diarrhoea or night sweats seemed to require. She continued to use these remedies irregularly during several months, with considerable relief. She was evidently stronger, and less emaciated. Her cough and spitting were better, and the night sweats were nearly removed. In short, her health was amended when I left the place in September 1791; but I had not sanguine hopes of her ultimate recovery, especially as there was no probability

probability that she would persist in the use of the medicines, of which she had been long heartily tired.

As I have, by accident, lost the register of cases which contained those of the three patients here mentioned, I am under the necessity of describing their complaints from memory; consequently, with less accuracy than I could wish. This, however, I can vouch for, that no circumstance of importance has been added or omitted.

The most remarkable circumstance attending the use of the blue vitriol, is the ease and expedition with which it operates, and the narrow limits within which its effects may be confined. I have frequently given from one to four tea-spoonfuls of it in the day, as a tonic laxative, in phthisical cases, while I was prescribing it in larger doses, as an emetic. I prefer administering it with this view, in the evening, from its tendency to check the night-sweats; but have, not unfrequently, given it two or three times in twenty-four hours, when the dyspnœa was particularly urgent.

I have, sometimes, used the extractum, or succus spissatus cicutæ, instead of the powder
of

of the leaves ; but I am rather inclined to prefer the latter.

I generally prescribe the tinctura opii ammoniata, when the patient complains of want of sleep ; and, frequently use an electuary, composed of conserva rosarum, nitre, and a small proportion of muriatic acid, or sal oxalidis acetosellæ, so as to render it pleasantly acidulous, with a view to relieve the hectic heat and sweats.

I have, sometimes, employed setons instead of blisters ; and my father's experience has led him to give them a preference. I have at present under my care, a case of phthisis pulmonalis, the history and result of which I shall, probably, communicate at some future time ; in which, the use of a seton has been decidedly beneficial.

I think it right to mention, what your readers will doubtless anticipate, that I have been consulted in many phthisical cases, in which this plan has not proved successful. I think, however, I may safely say, that it has always prolonged life, and often rendered it more comfortable.

IV.

IV.

History of a Case terminating favourably, in which an extra-uterine Fœtus was discharged, at an opening in the Abdomen, near the Umbilicus. Communicated to Dr Duncan, in a letter from Dr Colin Maclarty, of Jamaica.

A Healthy, good looking negro woman, named Juliet, about 22 years of age; the property of George Mawate, Esq. was seized with the usual symptoms of approaching labour, on the 1st of August 1790, when the common time of gestation had expired. But, from the lingering, unproductive state in which she remained for several days, the midwife and attendants grew impatient, and requested to have medical advice. Accordingly, my partner, Dr John Macklashan, was called in on the 5th; and, on examining the parts, was a good deal surprised, to find

none of those changes which generally precede parturition. In this situation, the poor woman was directed to be kept quiet : due attention was paid to the bowels, and an opiate was prescribed. I saw her the day following, along with Dr John and Dr Charles Macklashan, and found her much in the same condition : there was then, no alteration in the vagina, nor dilatation of the os internum. The tumour of the abdomen remained high above the pelvis, and had never in the least subsided. From these, and other appearances, we immediately began to suspect an extra-uterine conception ; and a little farther observation, perfectly confirmed us in our conjecture. One circumstance, however, occurred, which seemed to militate against the idea we had formed ; and which I am at a loss to explain, in a manner satisfactory to myself. A considerable discharge of pale-coloured blood from the vagina took place, and continued more or less for eight or ten days, and then gradually disappeared. Now, whether this extraordinary action of the uterus could be considered as having any connection with the general laws of the animal œconomy, which, at this period, would,

would, in an impregnated state, have peculiarly affected this organ, I will not take upon me to determine ; but will leave the fact to those more capable of judging. During part of August, the whole of September, October, and November, there was no apparent change. The poor creature was all this time in a state of extreme anxiety, eagerly looking up for relief from those who were no less solicitous to give her every assistance in their power ; yet, as it was the unanimous opinion of all the medical gentlemen who had seen her, that no operation should be attempted, prudence, as well as humanity, pointed out the propriety of patiently watching the event.

In the beginning of December, a circumscribed prominence began to form in the umbilical region, without creating much pain or uneasiness. This swelling increased for some weeks ; and the teguments, unequal to the resistance, at last gave way to a partial expulsion of a full-grown foetus. The lower extremities and breech, came out at the orifice ; and higher up, towards the stomach, the right arm, as far as the shoulder, was protruded at another opening, leaving an intermediate septum

of two and a half, or three inches of the muscles undivided. In this situation, it was the opinion of several gentlemen of acknowledged abilities in the profession, that, as nature had done so much, they would trust a little farther to her operations. At this time, I had just recovered from a fever; and, on the information of Dr Arthur Broughton, took the earliest opportunity of seeing this extraordinary case, which I found exactly as described by him, and as already stated. From this period, I was often with her; and perceiving no immediate probability of a separation of the part which seemed principally to confine the foetus, I was induced to make an incision, and to divide it. I then grasped the body, and endeavoured to extract the head; but, as it lay deeper, and was more impacted in the viscera than I could have expected, and finding my efforts, though gentle, likely to detach the body at the vertebræ of the neck, I had recourse to the forceps; with the assistance of which I readily secured, and extracted it. A vast quantity of most offensive putrid sanies followed, but no vestige of placenta; from which, I was led to conclude, that it must have been melted down into this
corrupt

corrupt fanies. A broad flannel roller was now wrapped, with a moderate degree of tightness, several times round the body, and nothing applied to the part but the mildest dressing, with a compress of soft old linen over it. An opiate was then ordered, and I left her.

This was on the 25th of December; and when I visited her on the 26th, I found she had rested tolerably well during the night, but complained of pain in her bowels, attended with diarrhœa. This complaint, arising, I presume, from acrid absorption, was now rendered particularly formidable, from the very emaciated state to which she was already reduced. By the aid of the bark, however, with a light decoction of cortex Simaroubæ, wine, and generous diet, which her master liberally supplied, I have the pleasure to inform you, that, on the 10th of January, she was so far recovered, as to be able to sit up, walk about the room, and to amuse herself.

Since that period, she has perfectly recovered her strength, and looks stout and healthy; but as yet, (February 19th), has had no return of the catamenia.

Such has been the favourable termination of this uncommon case; and, I am sorry to

add, in the midst of so much good fortune, her domestic tranquillity is in danger of interruption ; for so dreadful an impression has her late sufferings, and helpless prospect, left in her mind, that she seems determined never more to hazard a like event. But, as the negro who is her husband, still remains remarkably attentive to her, I am inclined to think, her resolution will not be permanent. Should it happen, and any consequences follow, worthy your notice, I shall be happy to transmit them.

“ Stimuli naturæ certe sufficiunt, et terror
“ morborum nunquam adhuc maturam virgi-
“ nem ab ara Veneris abegit, et nunquam abi-
“ gere potent.”

V.

Extract of a Letter from Mr Richard Hughes, Surgeon at Stafford, to Dr Fowler, Physician in York. Giving an account of a Strangulated Hernia, speedily cured by the application of Æther.

“ I HOPE the following case will be acceptable. You are at liberty to make what use of it you please. Perhaps, it might be thought worthy of a place in the Edinburgh Medical Commentaries. And, as you are well acquainted with Dr Duncan, as well as with me, I know of no one I should so much wish to communicate it to him, as yourself.

“ I own to you, I had so little hope of succeeding, that I did not go to apply the æther myself, but left it to my son. Mr Caufer, a surgeon of Stourbridge, who was, at that time, paying him a visit, was present at the application of the medicine.”

ON the 19th of July ult., I was called to visit ——— Pickerill, a debtor in the county jail. He was in most excruciating torture, occasioned by a strangulated hernia, attended with incessant vomiting.

Bleeding largely, calomel and opium, warm fomentations, tobacco glysters, and, after these, cold applications, &c. were used, without any advantage.

Every attempt, however gentle, to reduce it, increased the pain and vomiting. A violent rigor had also come on: and nothing seemed likely to give a chance for life, but the operation. In this situation, he had now been twelve hours, without the least abatement of symptoms.

It occurred to me, that æther, by the quickness of its evaporation, produces a greater degree of cold, than any thing we are acquainted with in a liquid state. I determined to try its effects. I ordered my son to take two or three ounces of æther, and pour it on the scrotum, and parts adjacent, by a little at a time.

It, almost instantly, produced a corrugation of the scrotum, attended with a great degree

gree of coldness of the parts to the touch ; but a considerable smarting and heat, to the feeling of the patient. By the continuance of this application, with a little gentle pressure at intervals, the parts gradually retracted ; and, in half an hour, were quite reduced. He became perfectly easy ; and is now in a good state of health.

RICHARD HUGHES.

VI.

*History of a singular Tumour on the Neck. By
Mr Samuel Lockhart, Surgeon, now in the
service of the Honourable East India Com-
pany.*

ON the 11th of April 1789, I committed to writing, the following case of John Anderson, a disbanded soldier, in the 60th year of his age.

About 30 years ago, there appeared on the right side of the neck, a tumour about the size of a walnut, after receiving a kick from a horse when in the army. For the following ten years after the accident, its increase was very imperceptible; and he found very little inconvenience from it. But, after this, it began to grow larger; so that, at the end of the next ten years, it had got to the size of the fist. It now
became

became very inconvenient to him, from its size; for he never had any very acute pain in it.

Being visibly increasing, he became very anxious to have it removed. He therefore applied for a consultation of the medical gentlemen; first at London, then in Ireland, and, last of all, at Edinburgh. But, in all of these places, he was told it would be a very dangerous operation, on account of its situation with respect to the large vessels and nerves of the neck.

He was now, from the size of the tumour, forced to quit the service. Ever since, it has been very sensibly increasing, though slowly. But, within these last six years of his life, it has grown more rapidly; and, at present, is of a most enormous size; extending from the clavicle, up to his ear, and stretching a considerable way over to the left side of the neck, both before and behind.

At first, the skin was stretched equally and smoothly throughout the tumour. But, within the last mentioned period, it has become very irregular; and there are several very large risings and depressions on its surface.

It

It has now become so inconvenient and troublesome to him, as to render respiration and deglutition difficult. And the motion of his under-jaw is very obscure. He cannot articulate plainly.

He was naturally a thin man, but very active; and enjoyed a very good state of health, previous to the accident; but, since which, he has been a good deal troubled with dyspeptic complaints. His sleep has, some time past, been a good deal impaired. He is much emaciated; and his voice is very feeble. Said, he rather heard with difficulty in the right ear.

Within these eight days, the tumour has ulcerated on the back part, the edges of which appear gangrenous; and there are several black spots on that side of the tumour. The discharge from the ulcer is very fetid, copious, and of a dark colour.

On the 6th of April, a violent hæmorrhagy broke out from the ulcer, to the amount of a pound or two; but was stopped by the application of cloths dipped in cold water and vinegar. The hæmorrhagy recurred again on the 7th, to a still greater quantity; and was stopped, as in the former.

No

No more hæmorrhagy occurred, until early in the morning of the 10th, when every thing was tried in vain to stop it. And he died about 7 o'clock the same morning.

He had another tumour, of the size of an egg, stretched over the coronal suture, of the atheromatous kind.

He had used a variety of remedies without benefit, the composition of which he did not know.

DISSECTION. On cutting the teguments over the tumour, they were found preternaturally thickened in several places. And immediately beneath, we found the *Platisma myoides* in the same state.

On laying open the tumour, we found it principally composed of fat; which, in several places, was hardened. And, dispersed amongst the fat, we found several pretty large cysts, containing a very fetid matter, of the consistence and colour of lintseed-oil.

On examining the root of the tumour, we found it adhering by a cellular substance to the trunk of the carotid artery, the whole way; the muscles so pressed away, as to turn the face towards the left shoulder.

The

The trachea was pushed over to the left side.

The right side of the under-jaw was so twisted, that the flat side of it turned towards the tumour, and the teeth lay horizontally in the mouth. Both salivary and lymphatic glands were found perfectly sound.

Nothing else occurred on dissection.

We observed, on the surface of the tumour, some very beautiful ramifications of veins, in a varicose state.

The tumour weighed thirty pounds.

VII.

Account of a remarkable enlargement of the Spleen. Communicated to Dr Duncan by Mr James Elliot, Surgeon's Mate, 23d Regiment.

A MAN, aged 26, of a relaxed habit of body, and middle size, was admitted into the House of Industry of this city, (Dublin), seemingly labouring under an ascites; which, as he said, had been gradually coming on for some years, but had increased rapidly for these some months past.

On examination, the abdominal swelling was found very considerable; of a smooth, uniform, shining appearance. However, as a considerable degree of hardness was felt all over the left side, without any perceivable fluctuation, it was considered as a complicated case;

case; and the operation of tapping was declined.

About a fortnight previous to admission, violent pains about the region of the stomach supervened, with nausea, and vomiting at times. To these, difficult respiration, and slight palpitation cordis, succeeded.

He remained in the house for three weeks, with little trouble from the above complaints, when he was seized with the usual febrile symptoms; which continuing to increase, he was removed to the Fever ward; and, in a few days, died.

On dissection, the spleen was found of an enormous size, reaching from the diaphragm, (which it had in some degree pushed upwards), to the cavity of the os ilium. Its breadth nearly occupied the left side; having pushed the intestines, and other viscera, wholly to the right, which occasioned the uniform external appearance.

The intestines were considerably inflated; and the stomach was wedged, in a perpendicular direction, between them and the spleen.

The left kidney was nearly in its natural situation, but considerably flattened.

The

The other viscera were of their natural colour, size, &c. but very much pushed from their natural situation.

The spleen, when taken from the body, was found to weigh eleven pounds thirteen ounces. Its texture, figure, and bluish colour, were little, if at all, changed. The dimensions were, in length, fourteen inches and a half; in breadth, eight and a half. In thickness, at the superior and middle part, was four inches and a half; and at the inferior part, four and a quarter.

Little or no water was found. Nor did any other remarkable appearance present itself.

It appears, that the above patient felt little inconvenience from the gradual growth of the spleen, till it had acquired such a size as to impede the organs of digestion; which occasioned the pains, nausea, and vomiting. And the difficult respiration, with palpitation cordis, were most probably produced by the interruption given to the action of the lungs and heart.

That enlargements of this viscus frequently take place, is undoubted: but I do not re-

collect of having ever heard of such a case as the above. I believe, Morgagni, in his elaborate work, *de Causis et Sedibus Morborum*, has related a dissection, where the spleen weighed eight pounds three ounces. From these, and the frequent *lusus naturæ* which the spleen exhibits, besides the little injury done to animals by its excision, may we not conclude, that its use is of little importance to the animal œconomy?

The above patient was under the care of Dr Burrowes; and was opened in the presence of several medical students.

The spleen is yet in the above gentleman's possession.

I have been thus circumstantial, as it appears to be an extraordinary occurrence.

VIII.

An Account of the Epidemic Catarrh of the latter end of the year 1789, as it appeared in Jamaica. By Mr John Lindsay, Surgeon: Communicated in a letter to Dr Monro.

S I R,

ALTHOUGH the epidemic catarrh has been often well described, and has been long known to be the most widely spreading epidemic we are acquainted with, yet, as you may, perhaps, have had but few descriptions of it from the Torrid Zone, especially from Jamaica, and among another species, too, of the human race, (namely Negroes), I have taken the liberty of troubling you with a short account of this disease, as it appeared here in the latter end of the year 1789. But, as it is generally desirable, and may be useful, to have some idea of the nature of the place where an epidemic disease takes place, I shall give, first;

a short account of the situation in which I saw this disease ; and, then, a few observations on the weather, and the prevailing diseases previous to, and accompanying this catarrh.

The district in which I saw this complaint, and to which, alone, I confine this account of it, is in the parish of Westmoreland. It is about 50 or 60 miles in circuit ; contains about 5,500 negro slaves ; 200 whites ; and a very considerable number of free people of colour. In this district, there is a great variety of both situation and climate. Some live on the seashore, in the neighbourhood of low woody swamps, ponds, and morasses ; others, where the shore is bold, rocky, dry, and rises soon into high and woody hills. Some of the estates are situated on low grounds, at but small distances from the sea, surrounded with ponds and swampy woods ; others on the banks of a river, navigable for boats and lighters, eight or ten miles from its mouth, and meandering through a very large tract of uncultivated morafs. Many are finely situated, from 5 to 10 miles distant from the sea, on beautiful, dry, declining hills, clear of wood,
and

and in the neighbourhood of high and woody mountains : some again, in low situations, surrounded, or almost buried, among lofty mountains, deeply clothed in their native impenetrable woods, where they are always subject to a damp and chilly air ; except during the sun's meridian splendour, and where there always falls a great proportion of rain. Others are placed almost among the tops of the mountains, at a distance from, and far above the level of the sea, nearly surrounded with hills and deep valleys ; full of woods and inaccessible rocks, where the air is in general tolerably cool, comfortable and healthy ; and where there is a large proportion of rain. And, lastly, there are some in one of the most open, large, and beautiful plains in Jamaica ; where the land is well cultivated, and where the weather is warm, dry, and regular.

I, next, take notice of the state of the weather, for a few months preceding this disease.

In the month of July, there were only six days wholly dry ; the 5th, 17th, 20th, 26th, 27th, and 28th. There were four days on which there was a great deal of rain, and very

heavy thunder and lightning ; viz. the 1st, 15th, 23d, and 29th. On all the other days there was less or more rain in the afternoons.

It may be observed, that the forenoons in this part of the island are almost always dry, the rains commonly falling from about noon, till 3 or 4 o'clock in the afternoon ; or, though much seldomer, in the evening. I have not called those days rainy, on which there fell only mild or slight showers.

The mercury in Farenheit's thermometer, in a small well-aired room, and fully exposed to every change of the atmosphere, varied from 77 to 72 in the morning, at sun-rise ; from 90 to 82, between 1 and 2 o'clock in the afternoon ; and from 86 to 76, about 9 o'clock at night : the above being always the times of observation.

There was not so much rain in this month as usual ; this being, commonly, a very wet month. The breezes were generally light and changeable ; and, although the mercury was not uncommonly high, the weather was hot and sultry, especially during the night ; and every

every body complaining of heat, uneasiness, and want of sleep.

From the beginning of the month, till about the 20th, pneumonic complaints were very frequent and severe, much more so than is common at this season; and several, especially of the old and weakly, were carried off. There were many coughs, with little fever; and more inflammatory fore-throats than ordinary. Complaints of the bowels, attended with diarrhœa, and often with the discharge of worms, were also very common; but these were ascribed to eating of green maize, (Indian corn), and many other green vegetables which this season brings in. There were also some rheumatic complaints this month.

In August, the dry days were, the 7th, 8th, 9th, 10th, 12th, 20th, 27th, 28th, 29th, and 31st. The rainy, the 1st, 2d, 11th, 18th, and 19th. The other days were very various: either calm, close, and sultry; or gloomy, with irregular squally showers, when but little rain fell.

The mercury varied in the morning, from 77 to 73; at noon, from 90 to 80; and at night, from 80 to 76.

This month much drier than usual.

The pneumonic fever of last month continued; but more mild, and with less inflammation. Several whites were attacked, pretty severely, with the remitting fever of the climate. Rheumatic complaints continued. The complaints of the bowels increased; and some fell into the true dysentery, by which a few of the weakly were carried off.

The dry days in September, were, the 1st, 4th, 9th, 10th, 22d, 23d, and 24th. The rainy were, the 7th, 8th, and 17th.

The weather was, in general, gloomy and changeable, with more thunder and lightning than is common this month.

The mercury, in the morning, varied from 77 to 74. At noon, from 90 to 80; and at night, from 82 to 77.

The pneumonic fever still continued; and several who were weakly, died. A few remitting fevers among the whites; and the complaints in the bowels continued, but not so numerous. There seemed to be more suppurating tumours than common; but, upon the whole, this month could not be called unhealthy.

In

In October, the following days were dry; viz. the 1st, 2d, 3d, 8th, 13th, 29th, 30th, and 31st. The 10th, 14th, 17th, 20th, 21st, 26th, and 27th, were rainy. The weather was very changeable: sometimes clear, calm, and sultry; sometimes calm and gloomy; and sometimes irregular squally showers. But it was much drier than usual, till the 20th and 21st, when there was a prodigious fall of rain, with dreadful thunder and lightning. The latter end of the month was moderate and variable.

The mercury varied in the morning, from 76 to 74. At noon, from 90 to 82; and at night, from 81 to 78.

Fevers continued; but the inflammatory symptoms not so high as they have been for some time past.

A few died in the beginning of this month, who had been ill in the last.

Many of the fevers now put on a mild intermitting form, and readily yielded to the Peruvian bark.

About the 16th, there appeared among the whites and mulattoes, particularly in children, erysipelatous inflammations in the throat, now
and

and then attended with flight specks and ulceration. And about the 20th, we were visited with the *Epidemic Catarrh*.

In November, there were only one or two slight showers till the 15th. On that day, and following night, there were frequent drizzling showers, with squally north wind. From the 17th to the 21st, the wind blew from the north and north-east, with uncommon severity, both day and night. People of all ages and colours, were complaining of cold, and muffling themselves up in the closest manner they could. On the 26th, there fell a heavy rain; and there was some rain on the nights of the 27th and 28th: the rest of the month was dry, with northerly wind.

The catarrh raged all this month with great violence: being, therefore, very seldom at home, my thermometrical observations were much interrupted. What I made, amount to this: The mercury varied in the morning from 74 to 72; at noon, from 86 to 80; and at night, from 76 to 74.

On the 21st of this month, there were two small shocks of an earthquake felt in several parts of the island; and an unusual brightness
in

in the northern sky in the evening ; suggesting to some, the idea of the *Aurora borealis*, and to others, that of a luminous reflection from some very great, but distant fire.

The weather, in December, was variable in the beginning, with several mild showers, accompanied with thunder, which is uncommon at this season. The latter end of the month, was, in general, dry, with a light northerly breeze, with now and then small showers.

The mercury varied in the morning from 75 to 66 ; at noon, from 84 to 76 ; and, at night, from 77 to 74.

The epidemic, after having visited successively, less or more, every estate and settlement, from the windward or easterly parts of the district, to the leeward or westerly parts of it, disappeared about the middle of this month, leaving many in a state of great weakness and debility. But the pneumonic complaints did not cease with the catarrh. There followed many cases of peripneumony of an exquisite form ; several of which proved fatal ; and they continued less or more for two months after.

After

After these preliminary observations, I shall next give an account of the disease.

This catarrh, or Influenza, as it was most generally called, appeared in this district, first upon an estate at a distance from the sea, almost surrounded with woody mountains, and subject to frequent rains. It affected some negroes first and most severely, who had but a short time before been brought from a pleasant, dry situation on the sea-shore in a neighbouring parish. It seized great numbers of all ages, colours, and sexes. Indeed, few escaped more or less of it. The form was most distinct in the young and healthy; and the ordinary symptoms were as follow :

The patient generally complained, first, of some chilliness and cold shiverings, lassitude, and general soreness all over him, as if he had been bruised; with an unusual sensibility to the coldness of the air. At the same time, there was a fulness of the face, especially about the eyes, which were full, had a dull appearance, were watery and considerably inflamed, and felt a prickling scalding sensation, as if the tears had been burning hot. There was a dull heavy pain in the forehead, and
over

over the eyes; a discharge of thin, clear, hot fluid from the eyes and nostrils; and the appearance of the whole countenance was often so much like that at the beginning of the measles, that many at first were doubtful, and looking often for the eruption. There was always less or more inflammation in the fauces, and generally some enlargement of the amygdalæ. Swallowing was not difficult; but there was a sharp pricking foreness in the throat, which felt as if it were raw, and had a number of sharp bristles, or hairs, applied to it. This tenderness of the fauces and throat, irritated by the thin, hot, sharp mucus plentifully secreted there, made the cough very frequent, painful, and distressing. There was commonly some straitness, very often pain in the chest, with less or more difficulty of inspiration. This last was sometimes great.

Sometimes there was a considerable fever from the beginning; but often this was hardly perceptible, except towards the evening.

When the patient was strong, the pulse was generally strong and full, seldom frequent, and often more soft and open than hard. Sometimes it was not different from natural; but,

but, in the weak and elderly, it was often small, weak, and oppressed, especially when the lungs were loaded with viscid mucus.

Blood taken at this time was sometimes dark-coloured and dense, especially in the young and athletic; but it was often more florid and soft, than a first sight of the symptoms might have led to expect.

The skin was commonly soft and moist, and the heat little different from the natural state. These were the general appearances of the first attack.

On, or after the third day, the first symptoms commonly abated. The cough became more free, and less teasing; and the patient brought up, with considerable ease, a copious discharge of mucus from the lungs, the best white, and of a whitish colour, of an uniform and pretty thick consistence, sometimes streaked with blood. This gradually changed into a clear mild mucus, easily brought up; and, with the cough, sometimes went away in a few days, but oftener continued from a week to ten or twelve days. This was the ordinary and mildest form of the disease. There were many, indeed, who had the complaint so slightly,

ly, that they neither left their employment, nor applied for medicine.

Great numbers, in a very short time, were attacked with this disease, which much alarmed almost every body; and the doctor's advice was eagerly applied for. Dr Drummond, an eminent and experienced physician, who has the chief medical practice of this district, satisfied them with regard to the nature of the disease, and the plan proper for the treatment of it.

It is well known that this disease, in its ordinary and mild state, is seldom very dangerous; and, in many cases, a mild and rather spare diet, rest, avoiding exposure to the air, and promoting a gentle sweat or soft skin for a few days, is sufficient for carrying it off.

When remedies were necessary, bleeding, less or more, in the beginning, when the patient was young and stout, gave relief; and it was, in many cases, necessary to repeat it. After bleeding, a mild purgative, if the belly was not already open, was given. A small portion of an antimonial, usually emetic tartar, was generally combined with the purgative. This commonly promoted the determination to
the

the skin ; especially if a few drops of Laudanum were given after its operation : and if the antimonial made them puke once or twice, it was an advantage. A gentle sweat was then kept up, by avoiding exposure to the air as much as possible, and drinking mild tepid diluents, such as barley-water, weak broths, gruel, &c.

Although the patients were forbid exposing themselves to any stream or current of air, they were not desired to have their apartments overheated with fire, or their bodies overloaded with clothes.

If considerable pain in any part of the chest, with difficulty of respiration, took place, blisters to the part affected were very useful, and always had recourse to. In such cases, also, bleeding was repeated, according to the strength of the patient. A free and copious expectoration generally soon came on, and, continuing for a few days, put an end to the disease.

This was the most common mode of treating this complaint ; but, in many instances, it was not only more violent, but extremely dangerous.

In

In several of the young, stout and healthy, most of the symptoms and danger of the true peripneumonia were brought on, and required the most diligent attention, and use of the most efficacious remedies in that disease ; especially those of early and free bleeding, and inducing and promoting a free and copious expectoration.

It was not unfrequently observed, however, that although many bore, and absolutely required free and repeated bleedings ; yet there were several instances, in which, though the symptoms were violent and alarming, bleeding could not safely be carried so far as the severity of the symptoms, and the strength of the patient might, at first sight, have given room to expect. The blood, in these cases, during the first days, was nothing, or but little, different from a healthy state. Afterwards, it became more dense, viscid, and frequently buffy ; especially about the end of the first week, or height of the disease. In these cases, the treatment was much the same as in the true peripneumonia ; such as, free and early bleeding, opening the bowels and skin, by the same medicines as in the common and milder

forms of the complaint, encouraging perspiration by diluents, &c.

When the force of the arterial system was abated by bleeding and unloading the bowels, antiphlogistic and diaphoretic medicines were freely used: such as, Nitre, combined with Crude Sal Ammoniac, with Camphire, or with a portion of Dover's powder, and sometimes with an antimonial, as circumstances seemed to require; and these were assisted by mild diluting tepid drinks. By these means, a free diaphoresis was generally brought on; and, if accompanied with an easy expectoration, every thing went on well.

But in some cases there occurred severe and obstinate pains in some part of the chest, which were but little relieved by the first bleeding, purging, application of blisters, &c. In these cases, the fever increased after the 3d and 4th day; respiration became very difficult, and the cough violent and distressing, with no sputum, or only a little, brought up with much exertion and fatigue. The use of the lancet was, in such cases, carried as far as could be ventured on. No period of the disease deterred from having recourse to it, when difficult

ficult breathing, fixed pain in any part of the chest, hot and dry skin, difficult expectoration, and the drying of blisters soon after they were removed, combined to require it. And although the strength and general habit of the patient seemed to forbid the use of the lancet in the latter end of the second week of the disease; yet, even then, under the symptoms now mentioned, a few ounces of blood taken, was followed by the best effects.

When bleeding had been carried as far as could be ventured on, blisters were then applied freely, and were of great service. But while the skin continued hot and dry, the pulse frequent and sharp, the breathing and expectoration difficult; blisters, then, often dry soon after they are taken off; and a repetition of them, in this case, is not only useless, but I have frequently seen them increase the heat and other symptoms of obstinacy, and consequently the danger of the disease.

In a few cases, where the patient was young and strong, and where the lancet had been very freely used in the beginning of the complaint, the disease went off by resolution, although the symptoms had been pretty severe.

But this was seldom; and expectoration was chiefly trusted to. To promote this, mild tepid diluents, as observed above, bland mucilaginous decoctions, such as that of Linseed sweetened with sugar, or the extract of Liquorice, acidulated with lemon juice, were used as common drink. The decoction of the radix fenekæ, joined with crude sal ammoniac, were used where the symptoms of inflammation prevailed; and with gum ammoniac, or some of the warm gums, and oxymel of squills, when the bronchiæ were loaded with viscid mucus, the exertion of the lungs weak, and all symptoms of inflammation absent. When any tendency to purging was observed, it was relieved by the paretic elixir, or a small quantity of laudanum. Along with these, other pectorals were often used with advantage, viz. decoctions of the wild Liquorice (*Abrus precatorius* Lin.), with Pear tree leaves (*Laurus Persea*), and the young leaves of the Plum tree (*Spondias Myrobalanus*), were used with advantage. I was informed also, that the infusion and light decoction of the Colt's-foot, (*Piper peltatum*), had been very useful; and the decoctions of several others of this genus might have

have been used, as mild diaphoretics and expectorants, with considerable advantage. Also the Sweet-broom weed (*Scoparia dulcis*), and the *Polygala paniculata*, with many others, might have been employed for this intention.

When the febrile symptoms were gone, and the patient rather weak, the expectorants were assisted by hartshorn, &c. ; and a very liberal use of wine was, in many cases, necessary.

In one or two, the disease was protracted upwards of three weeks. In one, in particular, who had caught a little cold when recovering from the first attack of the complaint, the symptoms began afresh, and severe, in the form of an acute pleurisy ; which, after being relieved by bleeding, blistering, &c. commenced in a few days again, the pain invading a different part of the chest. In this manner, she suffered repeated attacks : the inflammatory symptoms appearing successively in every part of the breast ; generally attended with a copious discharge from the lungs ; thin and gleety when the symptoms were severe ; more of a purulent form, when they abated a little ; and often mixed with blood. This patient, although every possible attention and

care was paid to her, fell a sacrifice to having imprudently exposed herself a little too soon to the night air. Another, who suffered much in the same manner, was saved with the utmost difficulty; and was long in recovering even a moderate state of health.

In some instances, the discharge from the lungs was uncommonly large, and continued for seven or eight weeks, endangering life by extreme debility. In a few cases, the miserable patients, despairing of life, gave themselves wholly up, refusing every kind of nourishment and assistance, from either the Doctors, their friends, or companions; and it was with the greatest difficulty, and the utmost exertion of patience, diligence, and humane industry, in their worthy masters or managers, that their lives were at last saved.

In such cases, a light and nourishing diet, with wine to support the patient, was indispensably necessary; and a pretty free use of the Peruvian bark was of great service, in gradually restraining the discharge from the lungs, and recovering the strength. An anodyne at night when the cough was troublesome, and

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no symptom of inflammation, or oppression of the lungs, present, was very necessary.

Notwithstanding the violence of the symptoms, and the length of time for which the lungs were sometimes affected, I do not recollect an instance of the phthisis pulmonalis taking place in consequence of this complaint.

In some instances, this Influenza commenced with dulness and languor, with a fluggish and weak pulse; skin cold, tongue moist and clean; and, in short, with scarcely a febrile symptom. This state sometimes continued one or two days, the patient not knowing what to do with himself.

When the nature of the epidemic was known, recourse was immediately had to the warm bath, and tepid diaphoretic drinks, to bring on the disease in its proper form; otherwise the patient ran a risk of life, from a torpor of the vis vitæ, and stagnation of the blood in the lungs. I knew two or three instances, where young, healthy, stout, and well-disposed negroes, after complaining for two days in the above manner, fell suddenly down at their employment, as if they had been struck with apoplexy; and if immediate

relief had not been afforded them, they would, to all appearance, soon have expired, suffocated by a stagnation of the blood in their lungs. In such cases, the patient was immediately freely bled ; then some warm sangree, or toddy, with some spirits of hartshorn, was given, and repeated till he was a little recovered. Soon after this, he generally fell into a sleep and profuse sweat. This was diligently kept up ; and the patients generally did well.—Such cases were alarming, always dangerous, and required a great deal of attention. In one negro, however, who died, and who had been affected somewhat in this manner, on being opened, the greatest part of the lungs was as compact and firm as a liver ; and a small portion, cut out, and put in water, sank immediately to the bottom.

A want of the exertion of the *vis vitæ* in the lungs, was generally predominant in those who were weak and elderly. In these, the febrile symptoms were often so very trifling, as to be scarcely worth noticing ; and their danger arose from the infarction of the bronchia with viscid, subpuriform mucus. In such cases, the disease having taken so much the
form

form of the *Peripneumonia Notha*, vomiting gently, if the patient could bear it, blisters, and warm gently stimulant expectorants, with the other remedies recommended in that complaint, were directed. Several, however, fell victims to the catarrh in this form.

In a few cases of negroes, and those apparently stout, but who had been much addicted to debauchery and hard drinking, the epidemic, along with its characteristic symptoms, induced a putrid diathesis; and particularly if any affection of the liver chanced to be present. The crassamentum of the blood in these cases was grumous, loose at bottom, covered with a yellowish jelly instead of a buffy coat, and the serum turbid, of a reddish yellow colour. The patient was restless, anxious, and dejected; respiration oppressed, and the sputum of a dark green, or bilious colour, often mixed with a dark thin sanies. The eyes, and roots of the nails, grew yellow, (a bilious tinge does not become generally conspicuous on a negro's skin), and great quantities of offensive bile were passed, both by vomit and stool.

These cases were but few. The symptoms readily pointed out the remedies. But, I am
sorry

sorry to say, when the first were severe, the latter, however diligently they were employed, were at last ineffectual.

These were the chief appearances which this epidemic catarrh put on in the district above mentioned. It was sometimes, however, accompanied with the symptoms of other disorders.

Sometimes the inflammation of the throat arose to a considerable degree of the *Cynanche Tonsillaris*. But this was easily relieved by the remedies commonly employed in that complaint.

Little ulcerations, now and then, appeared in the mouths and fauces of children, and gave a good deal of the appearance of *Cynanche Maligna* : but they were seldom attended with the typhoid fever, which generally accompanies this disease ; and they yielded readily to detergent gargles. Those who were weakly, and several of the whites and mulattoes, required the assistance of the Peruvian bark and wine. I have heard, however, that the *Cynanche Maligna*, in some parts of the island, was not only frequent, but often fatal, during this epidemic.

Upon

Upon one of the estates, where a great number of the negroes were very ill with the epidemic catarrh, a young man, one of the book-keepers, who had a great deal of fatigue in a constant attendance on the sick, was suddenly seized with severe pain across the breast, accompanied with such a weight and sense of spasmodic stricture, as almost deprived him of breathing. He fell down almost senseless; and, probably, would have fallen a victim to this attack, if he had not soon been relieved. The Doctor, fortunately, being at hand, he was freely bled, and some warm cordials given immediately, along with some hartshorn and laudanum. He recovered a good deal; but continued low and languid. He was taken in the same manner next day, when I happened to be in the house; and the circulation was soon so far arrested, that his face, lips, and nails, began to be of a livid purple, the skin cool, and the pulse feeble. He was immediately bled, and roused with wine and hartshorn. By these, with warm frictions, he recovered; but continued very weak. He had, all this time, but little or no fever; nor did the other symptoms of the epidemic, manifest themselves

themselves in this case. This young man recovered slowly after this: continued weak; and, at last, became subject to the attack of his complaint, repeated on any occasion of fatigue, particularly walking. In short, this complaint appeared, at length, to be nearly allied to that described under the title of *Angina Pectoris*. And, after being recommended to the use of bark, with snake root, and some steel bitters infused in wine, he was advised to change his present fatiguing employment for one more easy, and confined within doors. Since he has made this change, I have not heard of his being afflicted with the complaint.

It seems probable to me, that the first attack of this disease, was brought on by the influence of the catarrhal infection. But it is, perhaps, no less possible, that the loss of blood, which appeared necessary for the immediate preservation of life, joined to some predisposition in the constitution, might have given room for the complaint afterwards, to put on the form of *Angina Pectoris*.

I saw one case, resembling the *Cynanche Parotidea*; and heard of one child dying of the *Cynanche Trachealis*.

Towards

Towards the end of this epidemic, the fever often took the form of an Intermittent; and whenever the intermissions were distinctly marked, notwithstanding the forbidding appearances from the affections of the chest, it readily yielded to the bark: at the same time, such medicines were used, as the other symptoms required. The bark, however, was to be used entirely with the view of putting a stop to the fever in one or two paroxysms; for if a sufficient quantity was not briskly taken, so as to have this effect, this medicine, continued longer, was not only useless, but hurtful.

On some estates, this catarrh was very severe, and affected great numbers. On others, it was very mild; and, on a few, it was hardly perceivable. What this was chiefly owing to, was not very evident; but it was observed, in general, that this disorder was most severe and fatal, on those estates which were in the neighbourhood of large ponds. This, possibly, may be imputed to a custom very common among negroes, of throwing themselves into the first cold water they meet with, when they are heated by exercise, &c. And it
was

was still more remarkable, where any deaths happened ; and, undoubtedly, arose from another custom, but too prevalent among negroes ; which is, employing the whole night at their funerals, in riotous and noisy singing, dancing, drinking, &c. ; and, then, either sleeping drunk in the open air, or plunging themselves into the water, to cool and refresh themselves for more exercise.

These, Sir, are all the observations I have made on the epidemic catarrh. They tend to shew, that the appearance of this disease is much the same in every climate, and among every race of men. And you will form some idea of its mortality here, from knowing, that, among 5,500 slaves, 200 whites, and a large proportion of free people of colour, it proved fatal to 13 or 14 : and the greatest part of these were old, in whom, the disease took the form of the peripneumonia notha.

Whether the epidemic catarrh, arises chiefly from the influence of some particular condition or state of the atmosphere, or from contagion communicated from one body to another, may admit of some uncertainty and dispute ; but, it is probable, both may have some share in it.

it. A particular condition of the atmosphere, may have the effect of disposing the human body to be more readily affected in one particular manner, than any other ; and in whatever way the system is once affected, contagion from other bodies, may contribute to heighten the symptoms of the disease, and render it more dangerous.

Peripneumonies continued frequent and violent, for two or three months after the epidemic catarrh ; and, in the Summer, the hooping-cough became frequent, and often severe.

SECT.

S E C T. III.

M E D I C A L N E W S.

ALTHOUGH, from different circumstances, the progress made in building the New College at Edinburgh, during the course of last Summer, has not been so considerable as might have been expected, yet, the work has been carried on to some extent without interruption. And, in addition to the teaching-rooms, which were occupied last Winter Session by different professors, the various apartments intended for the Anatomical class, are now completed. On the last Wednesday of October 1792, the stated day for the commencement

commencement of the Medical classes at Edinburgh for the Winter-Session, Dr Monro began his course of lectures in the excellent new Anatomical Theatre. On this occasion, he addressed a very numerous audience, in an elegant and animated exordium.

He supposed, that the feelings of all, on first entering the place, would nearly correspond.

That, while they paid just tribute to the memory of the architect, whose genius planned the great and elegant work, of which this theatre made a part; they must be sensible how much was due to those persons, not less distinguished by their real patriotism, than by their rank in life; and particularly, how much was owing to the present very worthy and liberal-minded Chief Magistrate *, and to his colleagues, who laid the foundation of this work, and placed the execution of it in such hands.

The elegance and extent of the design, the readiness with which a most respectable list of liberal subscribers had promoted the execution of it, the countenance of those who ho-

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* Thomas Elder, Esq. of Forneith.

noured the meeting with their presence, and, above all, the bounty of the King, he observed, afforded to the students of this University, a most convincing, and, indeed, most flattering proof, of the estimation in which these sciences they were about to study, were held by the most intelligent and enlightened part of the community ; and how much therefore, they were encouraged and called upon, to employ their utmost attention and industry, in acquiring proper knowledge of them.

But the ardour for information and improvement in their particular profession, which has so long animated and distinguished the students of Medicine in this University, rendered it, he thought, unnecessary, and indeed improper, for him to dwell with them upon the subject ; and, at the same time, encouraged him to promise, in their name, with as little hesitation as in his own, that they shall, by their diligence, and every exertion in their power, repay the large debt they were fully sensible they owed to the munificence of the King, who had ever shewn himself the Patron of Science, and to the liberality of the Public.

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IN the memoirs of the Academy of Sciences, in 1781, M. Lavoisier published those experiments, by which he demonstrated, that charcoal of wood, combined with respirable air, composed fixed air, or carbonic acid. The proof by analysis, however, was required, to render the demonstration of the composition of this elastic fluid complete.

This has now been supplied by the ingenuity of Dr George Pearson of London, who has communicated to the Royal Society, a paper which has been published in the last volume of the Philosophical Transactions, containing an account of some experiments, in which he obtained charcoal and respirable air, by decomposing several saline bodies which contained carbonic acid; particularly, the mild fossile alkali. The agent he employed in this operation, was phosphorus; which being introduced into a glass tube, along with the mild fossile alkali, and heated to a red heat, robbed the carbonic acid of its oxygen, and was sublimed in the form of phosphoric acid into the upper part of the tube, while the lower part of the tube contained a

black or grey mass, from which charcoal was separated, by solution and filtration.

When quick-lime was treated in the same manner, a rose-coloured powder was found at the bottom of the tube, consisting of phosphorus and lime, which readily decomposes even cold water. The inflammable air rising in bubbles, carries with it a portion of the phosphorus, while the respirable air unites with the rest of the phosphur of lime, to form phosphoric selenite.

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THE attention of medical philosophers, has of late been much engaged about some new and singular experiments on the nerves; from which, it is alleged, that interesting discoveries have been made, respecting the nature of the nervous fluid. For these experiments, we are indebted to Dr Louis Galvani of Bologna, and Dr Eusebius Valli of Pisa. A pretty full account of them, drawn up by these gentlemen themselves, is published in the *Journal de Physique* of Paris, for July 1792, under the following titles:

Lettre

Lettre d'un ami au Comte Prosper Balbo, contenant un précis des experiences de Louis Galvani de l'Academie de Bologne, sur l'action de l'Electricité dans les mouvemens musculaires. Inseré dans la Bibliothéque de Turin, de l'année 1792. Mars, Vol. I. p. 261. And

Deux lettres de M. Eusébe Valli, Docteur en Medecine en l'Université de Pise, sur l'Electricité animale.

Of these papers, we intend to present our readers with a full account in our next volume. And it is not improbable, we may then also be able to lay before them, the result of some similar experiments, tending either to corroborate or invalidate the doctrine of the Italian Philosophers. At present, we shall only observe, that the grand conclusion drawn from their experiments, is, that animal motion depends on the electric fluid ; or, at least, on what may be called animal electricity. This they have concluded, from finding that the effluvium conveyed by the nerves on which motion depends, may be conducted, like the electric fluid, by metallic matter. For a muscle being cut, and the parts separated, motions excited in one part, produce a correspondent

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motion

motion in the other, when a substance that is a conductor of the electric fluid is interposed between them; but no such motion is produced, when a non-conductor is interposed.

Many of the experiments made by Galvani and Valli, have been repeated by some distinguished anatomists, both at London and Edinburgh; particularly by Dr Monro, at the latter of these places, who has exhibited some of them publicly in his Anatomical Theatre. Philosophers are by no means agreed, with regard to the conclusions which are to be drawn from them. But it is on all hands admitted, that they exhibit very wonderful phænomena. Much, however, yet remains to be ascertained: but, from the industry and ability of those engaged in this pursuit, we hope we may be able to communicate to our readers, some important information respecting it in a future volume.

We shall, however, at present, lay before our readers, the following short account of some very interesting experiments made on this subject, by Dr Edward Ash, who at present enjoys one of the Radcliffe travelling fellowships from the University of Oxford; and

and communicated by him, in a letter to his friend Dr James B. M. Adair, junior, physician in Edinburgh, dated at Vienna, October 30th 1792.

“ The animal being fastened down to the table, two or three of the superficial muscles were removed, till some of the larger nerves, the crural, for example, were brought into view; the crural nerve was freed from its connection with the flesh, &c. for about an inch, and a plate of tin foil of the same length, and one fourth, or half an inch, broad, introduced between the nerves and the flesh, in such a manner, that the whole of the dissected nerve rested on the metallic plate.

“ In this situation, the moment pieces of gold, silver, brass, and other metals are merely brought into contact with the nerve, the muscles of the leg are contracted and convulsed with great violence, as if from an electric spark. If the metallic body be kept for some time in contact with the nerve, a continued succession of contractions manifest themselves in the muscles, till the power of that part of the nerve which was touched, appear ex-

hausted ; and it is necessary to apply to another portion of the prepared nerve, to produce the effect. The different metals I employed, which were gold, silver, brass, and iron, had very different effects in producing the convulsions ; gold and silver acting very powerfully, brass in a weaker degree, and iron exciting the weakest operation, and sometimes hardly acting at all.

“ When the nerve was not prepared, by being brought into contact with the plate of tin foil, the different metallic bodies did not produce any perceptible effect.

“ Such were the phænomena when the nerve was touched by conducting bodies. On the other hand, non-conductors, as glass, sealing wax, and some other electrics *per se*, which I tried, produced, when applied to the nerve in the same manner, no effect whatever.

“ The pieces of gold, &c. when insulated, produced the same contractions, on being applied to the nerve, as when connected with conducting bodies.

“ When a thin plate of glass, or sealing-wax, was placed under the nerves, instead of
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the tin foil, the contact of the piece of gold produced not the least contraction or change in the muscles.

“ The crural nerve was cut through the middle ; the end which remained unconnected with the brain, placed upon the tin foil, and touched by conducting and non-conducting bodies, shewed the same phænomena as when entire.

“ The moment the tin-foil is removed from the nerve, either when cut or entire, the metallic bodies excite no contractions ; but instantly, on the tin-foil being restored, exert their power with great violence. I have tried these alternate operations near twenty times.

“ Not only when the whole length of the dissected nerve is placed on the tin foil, is the approach of the piece of gold or silver able to produce convulsions ; but when the nerve is divided, and the cut end merely brought into contact with a piece of tin foil sharpened to a fine point, the piece of gold applied to the nerve, at, or near the place of contact, excites vivid contractions of the muscles, though the rest of the nerve did not appear to acquire, by this means, the power of being acted on
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by the gold. This slight contact must, perhaps, be considered as a partial coating of that part of the nerve which is touched by the tin foil. The same contractions are produced, when thin slips of metal, almost of the fineness of hairs, have their points brought into contact with the side of the crural nerve, merely dissected from the flesh, without being divided. But the coating, with large pieces of tin foil, seems necessary to the production of strong and vivid contractions. Instead of placing tin foil under the whole length of the dissected nerve, I placed a small slip in contact with a portion of the nerve, only about one eighth of an inch long: the nerve, which before produced the contractions of the muscles when touched by it in any part of its length, now produced that effect, only when touched in the portion which rested on the slip of tin foil; and the other parts remained totally inactive.

“The nerve being prepared, by being brought over a small slip of tin foil at one end, a piece of gold was brought in contact with the other end of the nerve, without producing any contraction or change: but when,

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in this state, a communication was made between the piece of gold and the tin foil, by a metallic body touching both at the same time; at that moment, the most vivid contractions of all the muscles of the leg followed; and the effects produced by this method, seemed, in many cases, more striking and constant, than from any other manner of making the experiments.

“ Sealing-wax, and the non-conducting bodies, when used to form a communication between the gold and tin foil, never produced the least symptom of contraction.

“ I placed the whole length of the dissected crural nerve of the right side, on a piece of tin foil, and covered the whole of the naked muscles of the left thigh, with a metallic plate: in this situation, the moment a communication was made between the metallic coverings of the opposite thigh, by means of a metallic wire, all the muscles belonging to the right crural nerve, suffered strong convulsions: whether the nerve rested wholly on tin foil, or was placed only on a thin slip of that substance, the effects regularly followed.

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“ I repeated the experiments in the same manner, after having cut away the whole crural nerve on the left side. In the instant that a crooked wire, connected by one end with the metallic plate covering the muscles, came in contact with the tin foil on which the right crural nerve was placed, vivid contractions of the muscles of the right leg took place; and when one end of the wire was connected with the tin foil, and the other afterwards brought into contact with the plate lying on the muscles, precisely the same effects happened.

“ Having placed a piece of gold on the muscles of one thigh, I lifted up the dissected nerve of the other on a metallic wire, so that, for at least an inch of its length, it did not touch the muscles. The nerve being in this position, I touched with the wire, the piece of gold itself, or else long slips of tin foil connected with it; and very violent contractions always appeared. When the wire was made to touch the muscular flesh, without its being covered by some metal, no effect was produced; nor did any take place when it touched the gold, without being in contact with the muscles. When the communication between
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the gold and the muscles was made by a metallic body, though at some distance, the effect was as strong as when the gold itself was touched; while sealing-wax and non-conductors between the gold and muscles, fully prevented the contractions from taking place.

“ I made the medium of communication between the wire supporting the nerve, or the tin foil (for it is indifferent which) on the one side, and the gold which touched the muscles on the other, to consist of a metallic chain some yards long; and the contractions in this case were as strongly marked, when the end of the chain was brought into contact with the gold, as when the wire itself was made to touch it.

“ I interrupted the continuity of the metallic chain, by interposing a piece of sealing wax; and the contractions ceased to appear: and the same effect was produced, when the chain was divided, and the ends kept at the smallest distance from each other: the moment they were reunited, the effects appeared as before.

“ When I placed a wire under each crural nerve, no contractions followed when the ends of the wires were brought together; but when
both

both nerves were furnished with tin foil, the contact of the wires produced vivid convulsions on both sides.

“ It seemed, in general, when the nerve was divided, and the cut end of the nerve next the brain was treated as in the other experiments, that a general uneasy sensation, which appeared to affect all the muscles of the body, was produced ; but this effect very often failed.

“ The whole of the experiments I have related, I made with frogs and other cold-blooded animals. Professor Blumenbach informs me, that they do not succeed with white-blooded animals.

“ I never found that pitch balls, gold leaf, fine threads, or any other light bodies, connected in any manner whatever with the metals, manifested the slightest appearances of attraction or repulsion.”

In the present very limited state of our knowledge respecting these electrico-nervous phenomena, if the expression be allowed, it would be highly improper to draw any theoretical conclusion from them. We shall therefore only remark, that they seem, in some circumstances,
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to agree with, and in others, to differ materially from, the phænomena usually occurring in electricity.

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MUCH use has of late been made of the rectified oil of tar in different prisons and hospitals, with a view of counteracting the influence of contagion. This oil has particularly been prepared and introduced by Mr Edmund Saunders of Plymouth : And, from a short account of it, which he has subjoined to an address to the owners of ships in particular, and in general to all who have interest in preserving timber under water, it is represented as the most powerful and cheapest antiseptic ever yet tried.

The method which Mr Saunders recommends for using the tar oil, is, with a painting brush, to spread it on pieces of boards or paper, put under the beds of the sick, and occasionally repeated in small quantities. He observes, that Mr Cowdry, agent for the Mill-prison at Plymouth, and who had under his care the prisoners of war, has often said, that he believed the use of this oil had saved the
lives

lives of hundreds : and further, that there was scarce a bug, louse, or flea, to be found in the prison ; for that the oil of tar had destroyed them all.

The rectified oil of tar has also, we are informed, been extensively used at London, particularly in Newgate. The method, we are told, of using it in Newgate, is this. Every morning, as soon as the different wards are cleaned, the wardsmen of each, gets from the turnkey, about half a pint of the oil of tar and vinegar mixed, to sprinkle the ward. This is done with the view of purifying the air, and of preventing disease. But in the hospital it is used much more freely, according to the number of the sick, the nature of their complaints, and the prevalent effluvia.

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During the course of the present year 1792, several dogs have been observed affected with canine madness, in different parts of Britain, particularly in Scotland. The consequence has been, that some melancholy instances of Rabies Canina, have appeared among the human species. One in particular, which occurred

curred at Glasgow, and another at Edinburgh, were seen by many different practitioners in these cities.

The patient at Glasgow was a girl in the eighth year of her age. She was bit on the 21st of March 1792, by a butcher's dog suspected to be mad, and killed as a mad dog very soon after the accident. The parents, suspicious of the consequences, carried the child to Mr John Scruton surgeon, who, by way of prevention, cut out the whole of the wounded part as completely as he could, and afterwards supported a discharge from the wound thus made, for some length of time. He also put the child upon a mercurial course, and, by the use of calomel, supported a gentle salivation for a week or two. But notwithstanding these precautions, on the 27th of April, hydrophobia and other symptoms of Rabies Contagiosa appeared; and she died on the 29th of that month, the fortieth day from that on which she had been bit.

The patient who died of Rabies at Edinburgh, was a woman in the 74th year of her age. She was bit on the 3d of July, and continued free from any symptom of the disease,

till the 13th of September. She then became affected with severe pain arising from the cicatrix of the sore, and stretching up her arm. This was succeeded by shivering, followed by heat, thirst, nausea, and other febrile symptoms. On the evening of the 14th, she first perceived unusual difficulty, both in articulating and swallowing. These symptoms increasing with all the other attendants of Rabies, she was carried to the Royal Infirmary about seven in the evening on the 15th. There, recourse was had to the use of Opium, Æther, Camphor, and other powerful antispasmodics. But they did not seem to be productive of any good effect; and she died on the 17th about two o'clock in the afternoon, on the 77th day after the bite.

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A NEW remedy has lately been introduced into the practice of medicine, on such authority as may justly entitle it to an attentive consideration. Dr William Roxburgh, Fellow of the Royal College of Physicians of Edinburgh, an able physician and eminent botanist, at present in the service of the Honourable

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able East-India Company, and stationed at Samulcottah, in investigating the vegetables of that country, has discovered a bark, which he finds to be of equal efficacy with the Peruvian bark, in combating fevers of different kinds, particularly intermittents. Dr Roxburgh has transmitted to several correspondents in Britain, an accurate drawing and description of the tree which produces this bark. He refers it to the genus of Swietenia, to which the mahogany belongs; and he has distinguished it by the specific name of *Swietenia febrifuga*, from its medical properties.

Dr Roxburgh has also transmitted to the East-India Company, a sufficient quantity of the bark, for affording an opportunity of trying it in Europe. The directors have ordered parcels of this bark to be sent to the Royal Colleges of Physicians of London and Edinburgh, with a request that they will have the goodness to make trial of its effects, and to communicate to the Company their opinion of its virtues. Although many other places afford a much better opportunity for making a trial of a remedy against intermittent fevers, than either London or Edinburgh, yet, in

both, cases are not rare, by which the virtues of an article of this kind may be determined. We hope, therefore, in a future number, to be able to give some farther information to our readers respecting this article. At present, we may only observe, that if it shall really be found to possess these virtues which Dr Roxburgh alleges, the discovery must be of very great importance to Britain ; but still more to the British settlements in India, where Peruvian bark is very scarce, and to be had only at an exorbitant price.

* * * *

THE fruit of a tree supposed to be a Banksia, has been lately imported from the South-Sea islands. It has a kernel of the consistence of hard butter, and more oily than the almond ; with a very strong thick shell, of the size of a very large walnut ; and has nearly the figure and colour of a walnut shell. This fruit, if it can be had in sufficient quantity, must be a very nutritious and salutary kind of food.

At

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AT the annual meeting of the Medical Society of Paris, held on the 28th of August 1792, for the distribution of prizes, honorary rewards were conferred on several competitors.

1. In August 1790, the following question, a prize of six hundred livres, had been proposed.

Determiner, d'après les decouvertes chimiques modernes, et par des experiences exactes, quelle est la nature des alterations que la sang éprouve dans les maladies inflammatoires, dans les maladies febriles putrides, et dans le scorbut.

No memoir presented to the Society was judged to be of sufficient merit to entitle it to the prize. Honourable mention, however, was made of a memoir which had for its epigraph, “ Non ideo analyses sanguinis utilitate
“ sua destituuntur, dum sapienter noverimus
“ spes nostras recidere, neque plura docere
“ quam a natura discimus.” Messrs **Parmen-**
ier and **Déyeux**, members of the College of Pharmacy, authors of this memoir, were each

rewarded with a gold medal, of the value of an hundred livres. The Society, however, again proposes the same question, for a prize of six hundred livres, to be determined at their annual meeting in August 1794.—Memoirs on this subject must be transmitted to Mr Vicq d'Azyr, perpetual secretary, on or before the 1st of December 1793.

2. In August 1791, the Society had proposed the following question, a prize of six hundred livres.

Indiquer les moyens les plus efficaces de traiter les malades, dont l'esprit est devenu aliéné, avant l'âge de vieillesse.

Though no memoir, presented upon this subject, was thought worthy of the prize, yet the Society bestowed a medal, of the value of one hundred livres, on M. Pinel, M. D. resident in Paris, author of a memoir on this subject, which had for its epigraph, "*Gerere se pro cujusque natura necessarium;*" and which contained many valuable observations on the treatment of different species of mania.

3. The questions respecting the different kinds of milk; and the signs of venereal infection

fection in new-born infants, which we have mentioned in former volumes, are also referred to a future year. Memoirs competing for these prizes, must be transmitted to M. Vicq d'Azyr, on or before the 1st of December 1793.

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IN the Third Volume of the Memoirs of the Medical Society of London, we have an account of the distribution of the following prize medals.

The Fothergillian medal for 1790, was presented to Dr Robert Willan of Ely place, for the best dissertation on cutaneous diseases.

A silver medal, for the same year, was presented to Mr John Haighton, surgeon, for his paper on original deafness, and other ingenious communications.

And another silver medal was adjudged to Dr Caleb Hilber Parry of Bath, for his memoir on the removal of certain diseases of the head, by compression on the carotid artery.

The following medals were distributed for the year 1791.

The Fothergillian medal to Dr John Coakley Lettsom, for the best dissertation in answer to the question, “What are the principal diseases of great towns, and what are the best methods of preventing or curing the same.”

The silver medal for the best essay or essays, written by a Fellow, was adjudged to Mr James Ware, surgeon, for three valuable dissertations on Diseases of the Eye.

The other silver medal to Mr Charles Kite, surgeon at Gravesend, for his ingenious memoir on Submerfion.

No satisfactory answer having been given to the question on Mineral Poisons, which originally stood as the subject of the prize dissertation for 1792, it stands over till next year.

The silver medals for 1792, were adjudged,

1. To Mr William Turnbull, surgeon, for his dissertation on extra-uterine Gestation, and other ingenious papers.

2. To Mr John Shadwell of Brentwood, for his paper on the internal and external use of oil in Hydrophobia.

The subjects proposed for the Fothergillian medals, for the years 1793, 4, 5, and 6, are the questions

questions respecting the effects of Mineral, Vegetable, Animal, and Aerial poisons, mentioned in our last volume.

* * * *

THOMAS KEATE, Esq. surgeon to Chelsea hospital, and to the Queen and Prince of Wales, has been elected surgeon to St George's hospital, in the room of Charles Hawkins, Esq. who has resigned.

* * * *

THE new Westminster Lying-in hospital, in consequence of the death of Dr Leake, has had a new arrangement made in it, with respect to the medical officers, who have been elected as follows :

George Pearson, M. D. F. R. S., consulting Physician.

James Ford, M. D. } Physicians, Men-mid-
Robert Bland, M D. } wives extraordinary.

Thomas Bradley, M. D. Physician in Ordinary.

Lewis

Lewis Poignand, M. D.	} Physicians, Men-midwives in Ordinary.
Andrew Thynne, M. D.	

——— Lewis,	} Surgeons.
James Lynn,	

* * * *

DR CLARKE has been elected physician to the Asylum for female orphans, in the room of Dr Douglas, who has resigned.

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THE Trustees of Columbia college, in the State of New York, in North America, have lately constituted a Faculty of Medicine under their authority, by the style of “ The Dean and Faculty of Medicine in Columbia College, in New York ;” and have made the following appointments :

Samuel Bard, M. D. Dean.

Mr Richard Bayley, Professor of Anatomy.

Samuel Nichol, M. D. Professor of the Practice of Physic.

Jo. R. B. Rodgers, M. D. Midwifery.

Mr W. P. Smith, Materia Medica.

Sam.

Sam. Latham Mitchell, M. D. Chemistry.

R. S. Kiffam, M. D. Botany.

W. Hammersley, M. D. Institutes of Medicine.

Mr W. Post, Surgery.

We are likewise informed, that, to render this institution more complete, the Legislature of New York, have very liberally endowed the New York hospital, an elegant building, constructed on a plan suggested by the late Dr Fothergill, Sir John Pringle, and some other of the most eminent medical characters; but which, for want of funds, had heretofore been unoccupied. To this hospital, several members of the Faculty have been appointed physicians and surgeons; and it is their intention, to elect from their number two Clinical lecturers: so that a regular system of medical instruction is now established in that city.

* * * *

A VETERINARY College has lately been established in London, for the reformation and improvement of Farriery, and the treatment
of

of the diseases of cattle in general. This institution is supported by subscription: and, from the numerous and respectable list of subscribers, at the head of whom is his Royal Highness the Prince of Wales, there is every reason for believing, that a subject which has been too long neglected in this country, will, at length, receive the encouragement and attention which it deserves. According to the present regulations, it is under the management of a president, twelve vice-presidents, and twenty-four directors. Mr Viat de St Bel, a foreigner, who has particularly attended to this subject, is appointed professor. In conducting the studies, regular courses of lectures are to be given, and an Infirmary established for the reception of diseased animals. And we apprehend there can be little doubt, that the institution will answer many useful purposes.

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SOME years ago, Mr James Clarke of Edinburgh, Farrier to his Majesty for Scotland, who has deservedly obtained great credit for several judicious publications on different

ent subjects in farriery, published proposals for establishing a similar Veterinary school and hospital in Edinburgh. And although his plan has not yet met with such encouragement, as to put it in his power to carry it into execution, yet he has by no means deserted his intention. And from the countenance and protection he has received from the Duke of Buccleugh, and several other illustrious and patriotic characters, there is reason to hope, that, at Edinburgh also, this very interesting subject will, at length, meet with the attention it deserves.

* * * *

DR ALEXANDER HAMILTON, Professor of Midwifery, some months ago, published proposals for the establishment of a General Lying-in Hospital in this city; in consequence of which, a considerable sum has been already subscribed for that charitable purpose.

The principles of Dr Hamilton's plan, are,
1st, That the management of the hospital shall be vested in thirteen directors, and a treasurer, to be chosen annually by the subscribers:
2dly, That the patients shall be divided into

TWO

two classes, the married, and unmarried women : *3dly*, That the latter shall be lodged in apartments entirely separated from the former, and shall be attended by midwives alone, except when assistance of the physicians of the charity shall be found necessary : And, *4thly*, That the physicians shall attend in the hospital at a certain hour on certain days of the week, for the purpose of giving gratis advice on the diseases of women and children.

The directors of the present year, have purchased a house and area, placed in a situation admirably well adapted to the purposes of the institution ; and they expect to open it for the reception of patients, about the beginning of November next.

Care lectures on the chronic diseases of women and children, will be regularly given at the hospital.

The General Lying-in Hospital, it is therefore hoped, will not only be of important use to the wives of the indigent citizens, &c. but will also be a very valuable addition to the institutions for public instruction, established at this University.

* * * *

DR CLARKE of London is, we are informed,
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ed, preparing for the press a work, from which, much is expected in the medical department of Midwifery.

* * * *

DR JAMES HAMILTON, junior, of Edinburgh, son to Dr Alexander Hamilton professor of Midwifery, has been for some time engaged, in preparing for publication, a translation of the admirable work of Morgagni on the Seats and Causes of Diseases. This translation is to appear under what may justly be reckoned an improved plan. It has long been regretted, that the original of Morgagni contains so much extraneous matter, and is written in so diffuse a style, that few medical practitioners can find leisure to bestow upon it an attentive perusal. Dr Hamilton proposes to new-arrange the whole; to detail only the cases which Morgagni or Valsalva witnessed; to reject all collateral evidence; to prefix to each order, a short view of the history, seats, and causes of the included diseases; and to add to every important case, a few remarks. By adopting this plan, there is, we think, reason to hope, that he shall be enabled to render this very valuable work more generally

generally interesting, and, consequently, more extensively useful, than it has been in its original state. As considerable progress has, we are told, been already made in this work, it may probably be soon put to the press.

* * * *

Dr THOMAS TROTTER, now physician in Newcastle, who, at the time of his graduation in September 1788, published an inaugural dissertation, “*de Ebrietate, ejusque effectibus in corpus humanum,*” is now employed in the farther investigation of that subject, which was recommended to his attention by the Royal Humane Society of London, who honoured him with their thanks for the ingenuity and novelty with which he had already treated it. Dr Cullen also expressed a strong desire to see it continued by his pupil.

From the author's extensive observation in different climates, many interesting facts will probably be brought to light in this publication. As, however, it will be some time before the work be ready for publication, the author, we are informed, will think himself much indebted to any medical gentleman, who will favour him with

with any original fact upon the subject, addressed to him at Newcastle. What will be peculiarly acceptable, are, Cases of intoxication attended with uncommon symptoms ; Diseases which originate from habits of ebriety ; Observations on the best mode of treatment during a paroxysm that threatens sudden death ; and Accounts of the appearances discovered on the dissection of those who have died from drunkenness.

* * * *

Dr PERCIVAL of Manchester, is at present engaged in preparing for publication, a work on medical jurisprudence, which will probably appear during the course of next Spring. It will consist of six sections. The first will treat of professional conduct relative to hospitals or other public charities ; the second, of professional conduct in private or general practice ; the third, of the conduct of physicians towards apothecaries ; the fourth, of the knowledge of law requisite for physicians or surgeons ; the fifth, of the attentions due from the faculty to the means of preserving publick health ; and the sixth, of the demeanour and manners, and

of the literary, philosophical, political, moral and religious character, of physicians. To this work will be added an Appendix, containing, *1mo*, An address to the Governors, the Faculty, and the Clergy, of the Infirmary at Liverpool, on their respective hospital duties, being the substance of an anniversary sermon, preached before the Mayor and Corporation of Liverpool, in May 1791, by the Reverend Thomas B. Percival, LL. B. of St John's College, Cambridge, Chaplain to the Marquis of Waterford, &c. *2do*, Notes and Illustrations appertaining to medical jurisprudence.

* * * *

Dr THOMAS FOWLER, formerly physician at Stafford, now at York, who is already well known to the medical world by different publications, particularly by two small treatises, entitled, Medical Reports, the one on the effects of Tobacco in the cure of Dropsies, the other on the effects of Arsenic in the cure of Agues and remitting Fevers, has been of late employed in preparing for the press, another treatise on a similar plan, entitled, Medical Reports

ports of the effects of Phlebotomy, Sudorifics, and Blisters, in the treatment of Acute and Chronic Rheumatism. When we consider, that in this, as well as his former publications, Dr Fowler has adopted the Verulamian plan for the improvement of medicine, there can be little doubt, that his work, the fruit of experience and of accurate observation, will convey to the public much useful information.

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Dr Joseph Fox of London, Dr James M'Donnell of Belfast, and Dr James Hamilton of Edinburgh, son to the Professor of Midwifery, have, since the publication of our last volume, been elected Fellows of the Royal College of Physicians of Edinburgh; and Dr James Barter Makittrick Adair, has been admitted a Licentiate of the College. Messrs James Clark and Walter Harkness, have been admitted members of the Royal College of Surgeons.

Sir George Baker, Bart. Physician to their Majesties, has been elected one of the Ten honorary members of the Royal College of Physicians in Edinburgh, a vacancy in that

number having taken place, by the death of the late John, Earl of Bute.

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DURING the year 1792, Sir Joseph Banks, Bart., President of the Royal Society of London; Dr Kemp, Professor of Mathematics in Columbia College, New-York; Dr William Saunders, Physician, London; Dr Maxwell Garthshore, Physician, London; Dr John Stark Robertson, Physician, Bath; Dr Alexander Hunter, Physician, York; Dr Alexander Johnson, Physician, London; Theophilus Houlbrooke, Esq., and George Robertson, Esq., have been admitted non-resident members of the Royal Society of Edinburgh: and Dr John Rotheram, Dr Andrew Coventry, and William Hall, Esq., have been admitted resident members.

* * * *

THE Royal College of Physicians of London, have, during the course of the year 1792, been deprived, by death, of the following members: Sir Noah Thomas, Dr
Robert

Robert Knox, Dr William Pitcairn, Dr John Monro, and Dr John Leake. And the Royal College of Surgeons of Edinburgh, have lost Dr Robert Walker, Mr William Inglis, and Mr James Rae.

* * * *

IN our last volume, we mentioned the death of Professor Michaelis of Gottingen. But we committed a mistake in supposing him to be the author of the treatise de Angina polyposa. That work is the production of his son, who is still alive, and is now Professor of Physick at Marburg.

State

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State of the Thermometer, Barometer, and Rain, during the year 1791, according to observations made about amile from the city of Edinburgh.

MONTH.	THERMOMETER.			BAROMETER.			RAIN.
	High. Deg.	Low. Deg.	Med. Deg.	Highest. Inches.	Lowest. Inches.	Medium. Inches.	Inches & Decimals.
Jan.	47	31	37	29.82	28.20	28.99	2.250
Feb.	52	26	38	30.26	28.90	29.50	2.245
Mar.	59	25	40	30.35	28.65	29.90	0.710
Apr.	59	33	41	30.05	28.85	29.70	2.895
May	73	42	46	30.22	28.92	29.99	1.885
June	76	40	54	30.12	29.10	29.78	2.527
July	77	45	53	30.20	29.03	29.75	1.385
Aug.	72	45	53	30.32	29.30	29.85	3.315
Sep.	77	40	49	30.25	29.10	30.00	1.365
Oct.	62	33	43	30.41	28.40	29.74	3.960
Nov.	55	31	45	30.02	28.50	29.53	3.320
Dec.	43	20	37	30.25	28.64	29.61	1.115
Whole Year.	77	20	45	30.41	28.20	29.69	26.972

State

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State of the Thermometer, Barometer, and Rain, during the year 1791, according to observations made at the apartments of the Royal Society of London.

MONTH.	THERMOMETER.			BAROMETER.			RAIN.
	High. Deg.	Low. Deg.	Med. Deg.	Highest Inches.	Lowest Inches.	Medium Inches.	Inches & Decimals.
Jan.	53	31	42	30.58	28.18	29.56	1.957
Feb.	52	30	41	30.48	29.16	29.94	0.873
Mar.	55	31	44	30.67	28.90	30.20	0.716
April	64	41	51	30.11	29.08	29.77	1.460
May	67	39	53	30.37	29.53	30.02	0.794
June	80	47	61	30.22	29.39	29.93	0.332
July	78	32	62	30.24	29.44	29.89	2.194
Aug.	78	50	64	30.52	29.65	30.06	0.824
Sept.	77	43	59	30.33	29.52	30.09	0.482
Oct.	62	34	48	30.46	28.89	29.69	2.027
Nov.	52	25	43	30.28	28.76	29.68	2.527
Dec.	48	21	36	30.38	28.90	29.64	1.124
Whole Year. }	80	21	50	30.67	28.18	29.87	15.310

To the London register, which is extracted from the Philosophical Transactions, we find the following note added :

“ On consulting other registers kept in and near London, it appears, that the quantity of rain collected in the rain-gauge of the Royal Society, is remarkably deficient. Experiments are now making, to determine the cause of this deficiency, and, if possible, its amount. In the mean time, it was thought right to apprise the public of the fact, that no reliance may be placed on that part of the Meteorological Journal, till farther information be obtained.”

SECT.

S E C T. IV.

LIST OF NEW BOOKS.

PHARMACOPOEIA Collegii Regii medicorum Edinburgensis. Editio octava. 8vo, Edinburgi, 1792.

De Foetu Humano Differtatio anatomico-physiologica. Auctore Onuphrio Agnese Scaffi Genuensi, Phil. et Med. Doct. Reg. Soc. Med. Ed. Memb. 8vo, Edinburgi.

A system of Surgery. By Benjamin Bell, member of the Royal Colleges of Surgeons of Ireland and Edinburgh, one of the Surgeons

to the Royal Infirmary, and Fellow of the Royal Society of Edinburgh. A new edition. 6 vols. 8vo, Edinburgh.

A treatise on the management of female complaints, and of children in early infancy. By Alexander Hamilton, M. D. Professor of Medicine in the University, and Fellow of the Royal College of Physicians and of the Royal Society of Edinburgh. 8vo, Edinburgh.

The Animal kingdom, or Zoological system of the celebrated Sir Charles Linnæus; Class First, Mammalia; being a translation of that part of the *Systema naturæ*, as lately published, with great improvements, by Professor Gmelin of Gottingen, together with numerous additions from more recent zoological writers, and illustrated with copper-plates. By Robert Kerr, F. R. & A. S. S. E. &c. 4to, Edinburgh.

An inquiry into the nature, cause, and cure of the gout, and of some of the diseases with which it is connected. By John Gardiner, M. D. Fellow of the Royal College of Physicians and of the Royal Society, Edinburgh, &c. 8vo, Edinburgh.

An

An inquiry into the remote cause of urinary gravel. By Alexander Philip Wilson, M. D. Soc. Med. Ed. Soc. 8vo, Edinburgh.

A treatise on the Gonorrhœa virulenta, and Lues Venerea. By Benjamin Bell, Member of the Royal Colleges of Surgeons of Ireland and Edinburgh, &c. 2 vols. 8vo, Edinburgh.

Letters to Dr William Osborn, Teacher and Practitioner of Midwifery in London, on certain doctrines contained in his essays on the Practice of Midwifery, from Alexander Hamilton, M. D. F. R. S. Ed. Professor of Midwifery in the University, and Fellow of the Royal College of Physicians, Edinburgh. 8vo, Edinburgh.

Philosophical Transactions of the Royal Society of London for the year 1792. 4to, London.

Observations on the Scurvy, with a review of the opinions lately advanced on that disease; and a new theory, defended on the approved method of cure, and the induction of pneumatic chemistry. 2d edition. 8vo, London.

Memoirs

Memoirs of the Medical Society of London, instituted in the year 1773. Vol. III. 8vo, London.

Essays on the Practice of Midwifery, in natural and difficult labours. By William Osborn, M. D, 8vo, London.

A treatise on the Hydrocele, with the radical cure. By J. Earle. 8vo, London.

An inquiry into the causes which produce, and the means of preventing, diseases among British officers in the West Indies; containing observations, &c. By John Bell, M. D. 8vo, London.

An essay on the vitality of the blood. By James Corrie, M. D. 8vo, London.

An essay on vital suspension; being an attempt to investigate, and to ascertain, those diseases in which the principles of life are apparently extinguished. By a Medical Practitioner. 8vo, London.

The Medical Spectator, to be continued weekly. 8vo, London.

A treatise on the diagnosis and prognosis of diseases. Part I. By P. P. Price. 8vo, London.

A short inquiry into the merits of a new-discovered fact, of a relative nature, in the
venereal

venereal poison, &c. By Thomas Ogle, junior, surgeon extraordinary to his Royal Highness the Prince of Wales. 8vo, London.

Medical advice to the inhabitants of warm climates. By R. Thomas. 8vo, London.

A treatise on the fevers of Jamaica; with some observations on the unremitting fevers of America. By R. Jackson, M. D. 8vo, London.

An essay on the injurious custom of mothers not suckling their own children. By B. Lane. 8vo, London.

The utility of medical electricity, illustrated in a series of cases and practical observations. By Francis Lowndes. 8vo, London.

A treatise on the disease commonly called Angina Pectoris. By William Butter, M. D. 8vo, London.

A treatise on Air, containing new experiments and thoughts on combustion; being a full investigation of M. Lavoisier's system. By R. Bewley, M. D. 8vo, London.

An exposition of the principles of Anatomy and Physiology; containing the Prælectiones Anatomicæ of Ferdinand Leber, translated
from

from the original, published in Latin at Vienna. By Walter Vaughan, M. D. 8vo, London.

Case of extra-uterine conception, with plates. By H. Krohn, M. D. 8vo, London.

The descriptions and characters of the different diseases of the human body ; being the first volume of the Franklinian Improvement of Medicine. By George Edwards, M. D. 4to, London.

Select evidences of a successful method of treating fever and dysentery in Bengal. By J. P. Wade, M. D. 8vo, London.

A letter to the patentee, concerning the medical properties of the fleecy hosiery. By Dr Buchan. 8vo, London.

A complete treatise on the origin, theory, and cure of the Lues Venerea, and obstructions in the urethra, illustrated by a great variety of cases ; being a course of twenty-three lectures read in Dean-Street, Soho, in the years 1790 and 1791. By Jesse Foote, surgeon. 4to, London.

An essay upon single vision with two eyes. By C. Wells, M. D. 8vo, London.

Synopsis

Synopsis of British birds. By J. Walcot, Esq. 2 vols. 4to, London.

Medical histories and reflections. By John Ferrier, M. D. 8vo, London.

A practical essay on diseases of the viscera, particularly those of the stomach and bowels, the liver, spleen, urinary passages, &c. By John Leake, M. D. Member of the Royal College of Physicians, and Physician to the London Lying-in Hospital. 8vo, London.

The importance and method of cultivating and curing Rhubarb. By Sir William For-
dyce, M. D. 8vo, London.

The Botanic Garden. Part I. Contain-
ing the œconomy of vegetation. A poem;
with philosophic notes, and plates. 4to, Lon-
don.

An analysis of the new London pharmaco-
pœia, explaining the nature, principles, qua-
lities, uses, and doses of the various prepara-
tions and compositions therein contained, and
particularly calculated for the use of junior
students. By Ro. White, M. D. 8vo, Lon-
don.

An essay on the swelling of the lower ex-
tremities in lying-in women. By Charles
Brandon Trye, surgeon. 8vo, Plymouth.

An

An account of the efficacy of the aqua mephitica alkalina, or solution of fixed alkaline salt, saturated with fixible air, in calculous disorders, and other complaints of the urinary passages. By W. Falconer, F. R. S. 8vo, London.

A compendious system of the theory and practice of modern surgery, arranged in a new manner, and a new nosological and systematic method, different from any attempted in surgery, in the form of a dialogue. By Hugh Monro, surgeon. 8vo, London.

Effais sur les moyens de former de bons medecins, sur les obligations reciproques des medecins, et de la societé ; partie d'un projet d'education nationale relative à cette profession. Par J. J. Menuret, Docteur en Medecine, &c. &c. 8vo, Paris.

Monographie, pour servir à l'histoire naturelle et botanique de la famille des plantes étoilées : Oeuvrage couronné dans la Seance publique de l'Academie Royale des Sciences, Arts, et Belles Lettres de Lyon, le 7 Decembre, 1790. Par M. Willemet, Demonstrateur royale de Chimie et de Botanique au
College

College de la Faculté de Medecine de Nancy, &c. 8vo, Strasbourg.

Histoire abrégée de la Lithotomie. Par M. Saucerotte, Maître en Chirurgie gradué, Associé de l'Academie Royale de Chirurgie de Paris, &c. 8vo, Nanci.

Journal de Chirurgie. Par M. Default, Chirurgien en Chef de l'Hotel Dieu de Paris. Tom. I. & II. 8vo, Paris.

Verhandeling over den Waaren Aart der Kinder-pokjes; *i. e.* An essay on the nature and cure of the Small-pox. By the late Imam Jacob Van den Bosch, M. D. and member of several academies. 8vo, Rotterdam.

J. A. Entwurf einer praktischen Arzney-mittellehre, &c.; *i. e.* J. Arnemann's sketch of a practical history of the Materia Medica. Vol. I. On internal remedies. 8vo, Göttingen.

Medicinische Fragmente und Erinnerungen, &c.; *i. e.* Medical fragments and memorandums, &c. By M. A. Weikard. 8vo, Frankfurt.

Beytrag zur Kenntniss des Pemphigus, &c.; *i. e.* Essay on Pemphigus. By J. E.

Wichmann, Physician in ordinary to the Elector of Hanover. 4to.

Beschouwende en Werkende, &c.; *i. e.* Chemistry, theoretical, practical, pharmaceutic, &c. By M. P. G. Kastelyn, apothecary and chemist at Amsterdam. 3 vols. Tom. 1. & 2. 8vo, Amsterdam.

Herm. Jos. Brunninghausen, uber den Bruch des Schenkelbeinhalses; *i. e.* On the fracture of the neck of the os femoris in general, and particularly on a new method of curing it, without lameness ensuing. By H. J. Brunninghausen. 8vo, Wurtzburg.

S. T. Sommering Von Baue des Menschlichen Korpers, &c.; *i. e.* S. T. Sommering on the structure of the human body. Vol. I. Osteology. II. Syndesmology. III. Myology. V. Neurology. 8vo, Frankfort.

Systematischen Grundriss der allgemeinen Experimental Chemie; *i. e.* A general system of experimental chemistry. By Dr Sigism. Fred. Hermbstadt. 3 vols. 8vo, Berlin.

De morbis quibusdam commentarii. Auctore Clifton. Wintringham, Baronetto, M. D. Tom. II. 8vo, Londini.

J. E.

J. E. Gilibert, Med. Prof. *Adversaria medico-practica.* Pars I. 8vo, Lyons.

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